

Fathom

by Eddyline Kayaks

My goal in designing the Fathom kayak was to create a very efficient, balanced, mid-sized touring sea kayak incorporating many of the design features popular with North American and European paddlers. I wanted a cockpit configuration that fit large and small paddlers alike with a maximum of comfort, and I added styling and looks that set the kayak apart from the crowd. I intended the styling to include practical features such as retractable carrying handles, a day hatch, a recess for a deck-mounted compass and more. I included a skeg in this design to increase the range of performance of the hull in varying conditions and the option to easily change the back band to our traditional adjustable backrest. I intended the kayak to be easy paddling and fast when going either forward or backward and well balanced in wind and waves to please the advanced paddler, yet be sufficiently stable and well behaved to give the less experienced paddler a delightful time on the water.

—Tom Derrer, designer, Eddyline Kayaks

CA: 5' 5", 150-pound female. Day paddle, winds to 15 knots, waves to 2 feet. 30 pounds of cargo.
 SL: 5' 7", 165-pound male. Day paddles, winds to 12 knots, gusts to 20 knots, waves to 2 feet. 50 pounds of cargo.
 TE: 6' 1", 200-pound male. Day paddles, winds to 15 knots, waves to 2 feet. No cargo.

Length overall	16' 5 5/8"
Beam	22 1/2"
Volume	14.22 cu. ft.
Cockpit size	31 1/4" x 16 1/8"
Cockpit coaming height	
Forward	14"
Aft	10 3/8"
Height of seat	1 1/2"
Weight	54 1/4 lbs.

THE REVIEW

First Glance

Eddyline's Fathom is thermoformed from Carbonlite 2000, a proprietary plastic laminate sheet. It "has a very bright finish, the equal of the best gel coat. The deck has some molded contours that help stiffen it, and it easily supports my weight without buckling. The Fathom looks like a composite boat from a distance, but you can pound on it like a rotomolded kayak and it won't crack. The single-chine hull has some slight flex between the keel and the chine, as much as I'd expect from a composite hull, and overall the kayak seems very sturdy" (TE). The hull-to-deck seam is a glued extrusion with rubber end caps. The interior is just as smooth as the exterior. Hardware ends are capped to avoid snags. The Fathom "is definitely light enough for a solo carry, and the nicely thought-out retractable handles make tandem carrying a breeze" (CA).

Fit

The cockpit opening is just long enough for TE "to get into seat-first if I lean back a bit. There's a lot of space for size-13 booties with room to spare. The sides of the coaming seem to be right next to the hips, so the kayak has a good compact feel that's conducive to edging and rolling." For CA, at 5' 5", "the high foredeck didn't interfere with a high-angle paddle stroke but was high enough to inhibit my ability to maintain a horizontal paddle shaft while performing sweep strokes. A cockpit this deep, while affording a secure feeling, does

tend to restrict the mobility of a person my size."

The seat is molded plastic with a molded cloth-covered foam pad. It "had a good compact fit and provided a good connection to the boat. The lateral bracing was a perfect fit and kept me seated and centered even during rolling" (TE). CA found the seat "quite comfortable, and the back band provided excellent support and was easily adjustable by using the ratchet system." The backrest gave TE "very comfortable and firm support down low and didn't restrict my range of motion." The thigh braces of the keyhole cockpit are foam padded and "made contact comfortable mid-thigh and had enough contour to give me a solid grip for good edge control" (TE). They provided "good contact" for CA but "required a relatively high knee position" for her.

The Sea Dog foot braces "felt secure and comfortable" (SL). The deck fittings are rounded buttons that are partially



KAYAK REVIEWS

recessed. Bungees on the aft deck offer a place to secure a spare paddle. The bungees just aft of the cockpit span only half the deck—the day hatch occupies the other half—and were “difficult to use [for a paddle-float outrigger] from either side of the boat, but it was easy enough to launch onto the rear deck by holding the paddle to the cockpit coaming with my hand” (CA).

The Fathom has a “low-aspect-ratio skeg that lowers only a couple of inches, so when I used it, I had it fully deployed or very nearly so” (TE).

Stability and Maneuverability

The Fathom’s initial stability was rated “good” (SL) to “very good” (TE). The kayak “would be a stable platform for photography” (CA). Secondary stability was “excellent” (SL and TE) and created such a strong righting moment that CA had to “make a considerable effort and shift my upper body to attempt to set the boat on its edge. Once on edge, the boat responded with little additional effort. Despite the effort needed to achieve a high edge angle, the boat was maneuverable even when slightly edged and was quite easy to steer.” The Fathom has “superb response to edged turns, both with subtle corrections and aggressively edged maneuvers. The stern will skid around for very tight crisp turns. The fit, secondary stability and responsiveness make the Fathom a pleasure to maneuver” (TE). Even with its skeg retracted, it “tracks well and holds course without yawing” (SL).

Speed

SL found the Fathom “as fast or faster than reputedly fast kayaks.” TE “could hold 4.5 knots at a relaxed cruising pace, 5.5 knots at an exercise pace and peak at 6.25 knots in a short sprint.”

“The high front deck shed water well, even when pushing a loaded boat

BEST FEATURES

- Maneuverability
- Clean construction

TO IMPROVE

- Paddle-float outrigger capability

through large wind waves” (SL), though TE noted “the deep recess for the forward hatch can occasionally catch a bit of water and flip it upward toward the face. Other than that, there was not much spray.” CA found the Fathom “easy to steer in all directions in 15 knots of wind.” TE and SL both thought it “weathercocked slightly” when moving crosswind, but “it could be corrected either by deploying and adjusting the skeg or edging” (SL). “When surfing wind waves, the Fathom was easy to accelerate. It caught waves best if the skeg was deployed so I could focus on power rather than on steering strokes. Once on the face, the Fathom had good speed, and I could get good long rides” (TE).

Roll and Rescue

“The wet exit and reentry were easy due to the large cockpit. The back deck was a bit high, and it took a little effort to climb onto during the maneuver. The perimeter lines were well placed and easy to grasp” (CA), although “the deck lines didn’t extend all the way forward, making T-rescues less secure” (SL). “The kayak rolls easily, although the high back deck interferes with a layback roll. Reentry and roll was very easy in the large cockpit” (SL).

Cruising

“The low ends of the Fathom pinch the interior space, and the bulkhead placement reduces the compartment volume



A cockpit view showing the day hatch and deck bungees.

while increasing cockpit volume. You could get gear for a three- or four-day trip in the compartments, but to pack for a week, you’d have to pack gear in the ends of the cockpit” (TE). After rolling drills, TE reported “a few drops in the aft compartments,” CA “several tablespoons of water in the front and rear compartments” and SL noted “an hour of rescue practice and rolling let a couple of tablespoons of water in the day hatch and half a cup in the back hatch.”

“A 50-pound load didn’t seem to reduce speed much or affect handling or windage, but it increased the stability as well as the effort required to put the boat on edge” (SL).

The Bottom Line

CA thought “most of the objectives of the designer have been met. This boat seems best suited for a larger paddler and could make a good play-boat. Little detracts from the overall success of the design.” The Fathom “suits a larger paddler, particularly someone with large feet. The high initial stability would make it suitable for beginners, while the carving and high secondary stability provide potential for a new paddler to grow into it” (SL). TE “liked the Fathom’s agility and fit. It’s a capable boat for day paddling and cruising and would be a good all-around performer.”

MANUFACTURER’S RESPONSE

Thank you for an excellent review. It’s always a little nerve-wracking to place a boat you’ve put your soul into designing in the hands of three unknown paddlers, knowing that their experience and opinions will be published for the entire paddling community. In that context, my thanks to the testers for their objectivity and fairness. We are very proud of the Fathom. A great deal of time, effort and fun went into its design.

Regarding the small amount of water that invaded the compartments during rolling and reentry exercises, Eddyline puts a tiny vent hole in each bulkhead to equalize air pressure from changing temperatures. During an extended period of exposure, it is possible for tiny amounts of water to pass into a compartment. We feel this is a

better alternative to having your hatch covers blow off on a hot day.

We’ve had paddlers from 5’ 2” to 6’ 4” paddle and truly enjoy the performance of this kayak. On the other hand, CA’s remarks are true regarding knee height. The fit is the key to good handling of this boat. If the fit is right, then the boat will do what you want it to. The only true test is a live trial. To be fully appreciated, this kayak must be paddled. As a manufacturer, we do our best to provide a fit that is right for as many paddlers as possible, but in the final analysis, some performance paddlers will benefit from a bit of personal customizing. Your local kayak dealer should have a decent array of accessories for just that situation.

—Tom Derrer, designer, Eddyline Kayaks

**FATHOM
MANUFACTURING DATA**

Designed: 2006

Standard construction: Carbonlite 2000

Standard features: Keyhole cockpit with thigh, seat and hip pads; adjustable foam-padded back band; Sea Dog adjustable foot braces; three internal bulkheads—forward, aft and day hatch; recessed compass mount; perimeter lines; reentry and accessory bungees adjacent to the day hatch; retractable carrying handles

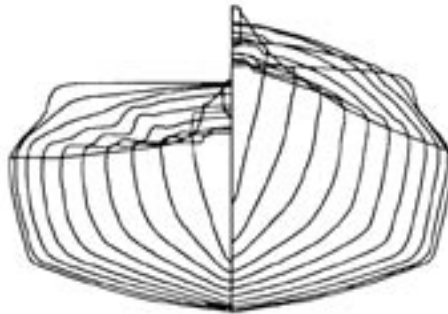
Options: adjustable backrest (vs. back band)

Weight: 54 lbs.

Price: \$2,499

Availability: See website for dealer locator

Manufacturer: Eddyline Kayaks,
360-757-2300; info@eddyline.com;
www.eddyline.com



SPEED VS. RESISTANCE

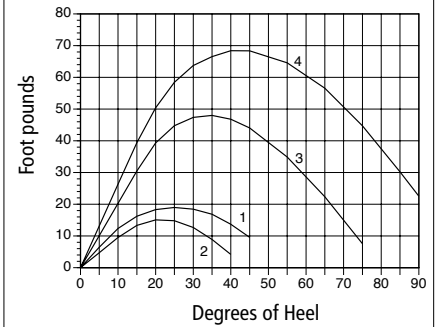
Resistance in pounds.

Speed	Winters/KAPER	Broze/Taylor
2 knots	0.95	0.95
3 knots	2.01	1.99
4 knots	3.70	3.63
4.5 knots	5.13	5.17
5 knots	7.78	7.71
6 knots	14.26	13.61

HYDROSTATICS

Waterline length	15' 5.8"
Waterline beam	21.8"
Draft	5.1"
Prismatic coefficient	0.51
Wetted surface in sq. ft.	22.32
Center of buoyancy (Hydrostatics calculated with 250-lb. load)	50%

Righting/Heeling Moments (Fixed-weight)



Stability Curves

1. 150 lb. paddler, no cargo
2. 200 lb. paddler, no cargo
3. 150 lb. paddler, 100 lb. cargo
4. 200 lb. paddler, 100 lb. cargo

TECH TALK

Readers interested in the full set of hydrostatics can find them posted on our website at www.seakayakermag.com along with additional data. An explanation of the terms and procedures used in the kayak test program is also available on the site.