



The Krogen 48 AE's full-displacement hull is the most efficient of the three major forms, but you'll trade speed for fewer gallons per hour.

CRUISING FOR A CRUISER?

Consider the many kinds of "trawlers" in today's market

BY LARRY POLSTER

Twenty-five years ago there was no question about what a cruising boat, or "trawler," looked like. There were relatively few builders in the market space, and all of the vessels, whether built by Grand Banks, Willard, Kadey-Krogen or Marine Trader, operated mainly in the 7- to 9-knot range.

During the 1990s, as the number of people interested in cruising exploded, thanks in part to Soundings' sister publication, PassageMaker magazine, so, too, did the variety of manufacturers and styles. The old salts will vehemently argue that a Down East-style vessel is not a "trawler." However, I believe I have developed a definition agreeable to all: A trawler is any vessel in which you are comfortable living aboard for the period of time you have planned to.

By that definition, if you plan on cooking, showering and sleeping aboard a Sabre, MJM, Eastbay or similar vessel for three days at a time and you are able to do that comfortably, that vessel is just as much a trawler as a Kadey-Krogen cruising the Caribbean for the winter.

One reason that many cruising boats are for sale so soon after purchase is that their owners decide that the experience is not what they thought it would be. After months or years of planning, their dreams fail to live up to their expectations and come crashing down around them. What happened? In many cases they bought the right boat for the wrong purpose.

It's essential to determine honestly what type of boating you plan to do before you buy. Further, understanding what hull form best fits your boating needs is more important than styling, fit and

finish. If you have the right boat for the right situation, you will enjoy it more and keep it longer.

So why is the hull form important to successful cruising? Because a boat is floating in water — it moves in its environs, whether at a dock, at anchor or at sea. How the boat moves will directly influence your state of mind and state of being. Here is an example I think everyone can relate to: Chances are pretty good that one of the reasons you

FULL-DISPLACEMENT HULL



bought your car is because of how it felt to drive. Chances are also pretty good that you could rent just about any car and survive for a short period of time.

However, if you are used to driving a new or late-model Range Rover, are you really going to be happy driving that 1980 AMC Pacer wagon through the Alaskan wilderness, even if it was a deal? I think you get my point. If you are not comfortable, you will not be happy. Figuring out your boating intentions is an imperative part of the boat-buying process. They will, in turn, dictate the type of trawler that most successfully fulfills your cruising dreams.

Full displacement

Compared with other hull forms, a full-displacement boat has a greater beam, draft and load-carrying capacity. As an example, the Krogen 44 AE has a beam of 16 feet, 4 inches, and draws about 4 feet, 6 inches. The boat will settle in the water 1 inch for every 2,200 pounds of gear, fuel and stores you put on board. This measurement of load-carrying capacity is called “pounds per inch immersion.”

An ocean-capable full-displacement vessel also will have some form of ballast for added stability. The only thing a full-displacement vessel does not do well is go fast. Laws of physics dictate that the maximum theoretical hull speed for a full-displacement vessel is 1.34 times the square root of the length of its waterline. (This formula is referred to as the speed-to-length ratio, abbreviated as S/L.) In practice, this ratio is closer to 1.4, and no reasonable amount of horsepower will cause the vessel to exceed this number.

I use the word “reasonable.” With a ridiculous amount of power you could cause a full-displacement hull to go skipping uncontrollably across the water like a duckling attempting to take flight for the first time.

The Krogen 44 AE has a length at the waterline of 40 feet, 11 inches, which means her top speed is roughly 9 knots. The upside to this phenomenon is that at a speed of 7 knots (an S/L of just 1.1) the full-displacement boat burns only 1.9 gph and has a range of more than 3,000 nautical miles.

Semidisplacement

A semidisplacement boat has a moderate beam, draft and load-carrying ability compared with a full-displacement vessel. The hull also tends to flatten out as you move aft of center, and this difference in

hull shape, combined with a narrower beam and more horsepower, allows the vessel to achieve an S/L of between 1.4 and 3. The American Tug 435, with a top speed of nearly 16.5 knots and a waterline length of about 38.5 feet, is an example of a semidisplacement boat.

Speed does, however, come at a cost. At 10.1 knots, she is burning 11.25 gph because the large engine (500 hp) uses its might to try to get the boat up and out of the water on the flatter part of the hull. Roughly six times the fuel used by a full-displacement design makes the boat go 1.5 times faster. Consumption and range are better at a little more than 7.5 knots, burning 4 gph.

Although this might sound like a reasonable approach, engine manufacturers state unequivocally that running an engine at significantly reduced rpm from the engine’s intended cruise rpm (known as under-loading and over-cooling) will increase maintenance and shorten engine life.

Planing

Purists would say a planing hull can’t be a trawler, but with our more practical, experience-oriented definition it certainly can. One just needs to be realistic about expectations because a planing-hull vessel is narrower for a given length than the other two hull forms. Simply put, this means you can carry less stuff.

On the positive side, a boat such as a Sabre 42 will get you to your destination in a hurry, with a top speed of more than 30 knots and a comfortable cruising speed of 22 knots. The downside is that it takes a lot of power to get and keep a vessel up and out of the water at that clip. At 22 knots, the Sabre 42 burns 26.3 gph. That’s three times the speed of a full-displacement vessel of similar length but burning 13 times the fuel.

Need for speed

For many cruisers, especially those not yet retired, time is of the essence, and speed is a necessity — or at least they think so. What do I know that they don’t? Perhaps it’s a more adept perspective of time.

Follow me through an example with two boats. Warwick, R.I., to Block Island is a distance of fewer than 35 miles, and for 32 of those miles a boat could run at speed. This makes the trip a hair over four hours in a full-displacement vessel, such as the Krogen 44 AE, or about two hours in a planing-hull vessel, such as the Sabre 42. (Remember, the planing-

See Trawler types, Page 40

SEMIDISPLACEMENT HULL



PLANING HULL



hull vessel must run at 6 knots for about 3 miles of the 35-mile trip).

Still, on the surface, it would appear that the owner of the planing vessel has two more hours to enjoy Block Island. Not really. You see, the full-displacement owner casts off and makes coffee, showers and cooks and eats breakfast, all the while making way toward his destination, provided he has a good first mate. These activities are completed during the four-hour trip.

The other boater must make coffee, shower, cook, eat, clean up and stow everything before getting under way. Depending on the predilection habits of your significant other and any guests aboard, that can make the overall trip longer. Regardless, some amount of time must be added to the overall voyage because most of us aren't going anywhere in the morning without coffee, a shower and some sustenance in our bellies. I am perhaps a bit biased, but I think you get my point.

Need for speed redux

One fallacy about hull forms that I hear a lot at boat shows is: "I want a fast boat so I can outrun bad weather." That statement sends

the insurance agents ducking for cover. Why? They know that one of the safest places to be in an approaching squall is in a well-found boat away from marinas and traffic. Accidents happen when people feel rushed, especially when their haste is weather-induced. We show poor judgment, people get hurt, and property gets damaged.

So what would I do?

There is a lot to think about when you purchase a cruising boat — any boat, for that matter — and I hope I have shed some light on the pros and cons of three major hull forms. Do your research, ask questions and determine the type of boating you will be doing.

As you make decisions to fulfill your dreams, please don't be sold by a deal, don't be sold by the sizzle, don't be sold because they will take your boat in trade, don't be sold on thinking you can run a fast boat slow and please don't buy a boat with a little more speed to outrun a storm. Lastly, please do not wait too long for the perfect moment. I have yet to see an armored car follow a hearse to a cemetery. ■

Larry Polster is vice president of Stuart, Fla.-based Kadey-Krogen Yachts, a builder of full-displacement cruising powerboats.