

BY BILL SPRINGER

HOLDING POWER

WE PUT THOUSANDS OF POUNDS OF FORCE ON **14 DIFFERENT ANCHORS** TO SEE HOW WELL THEY WORK. SOME RESULTS MAY SURPRISE YOU

WHICH ANCHOR HOLDS BEST?

It should be a simple question. We've put a man on the moon and have decoded the human genome, so surely someone has designed the ideal anchor—one that sets quickly in all bottoms, steadfastly stays in place even in storm conditions, and reliably resets itself if the wind shifts dramatically. It should also be light enough for a couple to handle on a 35-to-40-foot boat and be easy to retrieve when the time comes. How hard could it be to design and build such a basic device? Harder than you think.

After three days of testing 14 different anchors in three different locations off Santa Cruz, California, Jeffery Moser from *Power & Motoryacht* magazine, Toby Hodges from *Yachting Monthly*, Chuck Hawley and several colleagues from West Marine, plus yours truly from SAIL confirmed what we all knew going in—that the effectiveness of any anchor is highly dependent on a long list of variables. Some variables (scope, anchor design, and weight) can be controlled; others (bottom surface, wind, and swell) can't. We also knew that the validity of our results depended on ensuring that all variables (apart from the design of the individual anchors) were kept as uniform as possible; all anchors were tested multiple times with identical scope in identical conditions. We tested in three different locations—on the west and east sides of Santa Cruz's wharf and off New Brighton Beach, near Capitola. The seas had just a hint of swell in all three locations, and the wind varied from flat calm to a maximum of 12 knots. We took bottom samples at each location with a weighted core sampler to determine the composition of the top 5 inches of the bottom surface. All three locations had a layer of fine dark sand on top of harder, finer, claylike sand. The New Brighton location appeared to have a thinner layer of sand and a harder layer of claylike sand than the two wharf locations.

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WEIGHT: 22 LBS > PRICE: \$420

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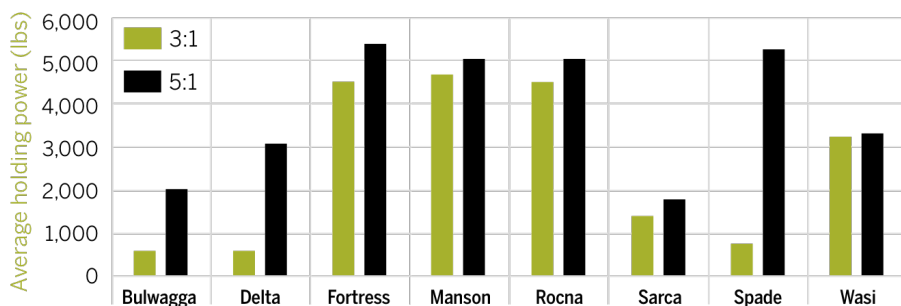
The Fortress FX37 was one of several anchors we tested that consistently set quickly and held up to 5,000 pounds of load on multiple sets in multiple locations. Its sharp, large flukes dug in immediately. As we increased the loads and the rode became bow-string tight, the boat shuddered and kicked up some impressive turbulence at the stern but the anchor didn't budge. At only 22 pounds the Fortress was one of the lightest anchors we tested, and it was the easiest to stow (it can be broken down and will fit in a slim bag). It also held over 5,000 pounds on 3:1 scope. With its light weight, quick setting and retrieval, enormous holding power at a variety of scopes, and easy stowability, the Fortress ranked high among all the anchors we tested. However, we did bend

**MAX
5,000 lbs
LOAD**



a fluke slightly during our veering test. This was while the anchor was under load, so it would be unfair to say anything other than it withstood a tremendous amount of abuse and still functioned properly. It would be difficult (but not impossible) to secure in a bow roller when not in use.

EFFECT OF SCOPE ON HOLDING POWER



EFFECT OF LOCATION ON HOLDING POWER



Anchors that did not generate significant holding power are omitted