

FLORIDA SPORT FISHING

JOURNAL // ONLINE // TELEVISION

Made in Florida: Anchors



Mission Objective: Investigate & Reveal

Wonder what goes into manufacturing the tackle, gear and accessories we all use today? Anglers often take for granted the tremendous effort it requires to engineer, design and build all of the equipment and countless components which combine to enhance our boating and sport fishing experiences.

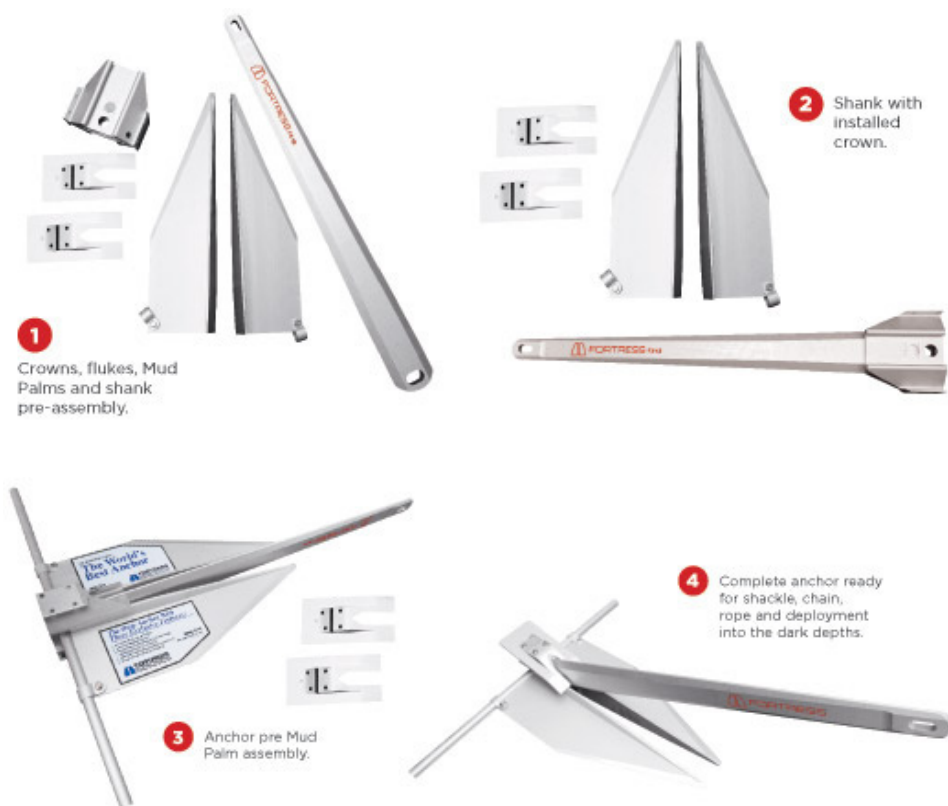
You name it, and somewhere in Florida is a team of dedicated professionals investing long hours to produce the assortment of fishing gear we so cherish. We wanted to learn more about these people and about the products they specialize in and know that you, too, will be fascinated with what we discover in our ongoing quest to find out “how it’s made.”

The modern marine anchor is unquestionably one of the most important pieces of safety gear carried aboard a vessel of nearly any size. When your propulsion system fails or a stiff breeze begins to unexpectedly blow, your vessel’s anchoring system can mean the difference between safety and peace of mind, or potentially running aground. Worse yet, your vessel may end up drifting aimlessly out to sea.



For decades there have been many myths about anchors. The philosophy that “the heavier the anchor the better” is probably the most common misconception. Through our research we learned that today, modern designs and state-of-the-art engineering have made anchors not only better but substantially lighter, too! In several real world tests, including one completed by the United States Navy, the best holding anchors were actually among the lightest. Such carefully scrutinized tests have proven that an anchor’s design and its ability to dig dip into the substrate have more effect on holding power than weight.

“All anchors perform the same” has been another long time belief. Not so! Various anchor designs and different manufacturing materials make similarly appearing anchors quite different. And when you consider the value of your most prized possession, regardless of how good your insurance policy is, an anchor is no place to compromise.



Another false statement is “anchors that look alike perform alike.” We were quickly informed that looks could be deceiving. Again, technical designs, manufacturing processes and different metal alloys go through extensive testing and varying degrees of quality control, and some are just plain better. This is why some anchors perform more effectively than others even though the device may look extremely similar to a less expensive counterpart.

“Is steel the strongest material for an anchor?” The answer is “No.” Many materials are now stronger than steel. For example, high-tensile aluminum magnesium alloy is well suited for anchors and is, pound for pound, more than twice as strong as steel.

Keeping all of the above in mind, safe boaters must remember that proper and effective anchoring is nowhere near as simple as tossing “the hook” over the bow and hoping it grabs. Your anchor is just one part of a total ground tackle system - a system that is comprised of the anchor, chain and shackles, rope, deck gear and most importantly, your own boating skill and knowledge.

To discover and report the latest on modern anchor designs, we turned directly to the industry leader, Fortress Marine Anchors.

Based in Ft. Lauderdale, Florida, Fortress Marine Anchors is American Bureau of Shipping certified and has been producing the strongest, lightest anchors for more than two decades. The company takes anchors very seriously and today ships more than 25,000 units per year to safe boaters and savvy fishermen all over the globe. Unlike many industry manufacturers who produce an array of products, Fortress designs and builds one item and one item only - anchors. They do, however, offer three series of anchors - their signature Fortress Marine Anchors, the strongest, lightest in the world, Guardian Utility Anchors for budget consciousness boaters, and the Commando Small Craft Anchoring System, a complete package containing anchor, chain and shackle, rope, and weatherproof Cordura® storage bag.

The company got its start in the mid-80s when its owner, Don Hallerberg, an avid boater and engineering marvel, believed he could design and mass-produce a better mousetrap. Close to a million flukes later, today Fortress Anchors is a household name in the maritime community, and their proven manufacturing process begins nearly the same as it did 20-years ago in a large metal fabrication facility staffed by dedicated machinists who clearly take great pride in their work.

While the finished product is an amazing modern marvel (considering a 10-pound piece of aluminum can securely hold a 15,000-pound sportfish) the process gets underway with raw billets of aircraft-grade aluminum magnesium alloy nearly 20-feet long which are delivered via 18-wheeler and stacked neatly in piles reaching the ceiling high above. The exact source and composition of the aluminum magnesium alloy are highly guarded proprietary secrets, which we didn't dare ask to be revealed. With 17 sizes of anchors, manufacturing starts by cutting each length of raw billet into manageable sections destined to be machined into crowns, shanks and flukes, the three main components that make up a Fortress Anchor.



Unique to Fortress is that each of the company's anchors is fully collapsible for easy storage when not in use - an innovative feature for small boaters or those who want to store a secondary anchor. What could be worse than running to Bimini for the full moon mutton snapper bite and for one reason or another, your only anchor is rendered useless.

Regardless of size or weight, on the spot disassembly and assembly take very little effort and can be completed in less than 60-seconds. Plus, each Fortress Anchor is adjustable. In mere seconds, the flukes can be set from 45-degrees, ideal for penetrating soft mud, and 32-degrees from the shank, a more effective angle for hard sandy bottoms.

With a plug of the shank now pre-cut, it is positioned in a CNC metal-eating monster where the shaping process commences. This is also where a powerful precision drill does its dirty work. After the shank has been tapered and a hole has been drilled in each end, one for attaching the shackle and one in the opposite end to facilitate final assembly, the shank makes its way to a second CNC machine for further honing. Unlike competitors anchors, the sides on the shank of a Fortress anchor are sharpened to an almost knife edge, allowing the shank to dig deep into even the toughest substrate. Final steps include deburring and engraving the instantly recognizable Fortress logo. Polished, painted and cleaned, the shank is now ready for final anchor assembly.

Simultaneously, pairs of flukes are cut to length, shaped, sharpened and deburred to remove unwanted metal shavings. The flukes act as shovels and are the components of the anchor that actually do the digging. The deeper the anchor buries itself, the more weight sits above it and thus, the greater the holding power.

At the same time, the reinforced crown, the component of the anchor that experiences the greatest force, is cut, shaped and drilled. The crown acts as the hinge and must withstand extreme tension. The crown is where the shank and flukes come together so it is imperative that this component never fails, which is why flukes and shanks bend before a crown ever gives.



Along with these major components, a pair of Mud Palms, small aluminum plates that slide onto and bolt to the top and bottom of the crown and help the anchor set in any sort of bottom, are also cut, shaped, drilled and deburred. Once all of the pieces are complete, a thorough inspection is again conducted and the pieces are neatly stacked and ready for final anchor assembly.

It was clear after only a few hour tour at Fortress that the entire team, including Brian Sheehan, Sales & Marketing Manager, take great care in ensuring anchor failure is the last thing any boater needs to worry about. Not only do they test their own equipment, they also test every other anchor on the market and continue to stand behind the slogan, "Not Just Stronger, Lighter!" In fact they are so confident in their anchors, Fortress offers an unconditional lifetime parts replacement warranty, which is transferable to any Fortress owner - no questions asked!

Looking back, it really was quite an amazing experience witnessing raw aluminum alloy morph into a functional anchor. It's a shame; but the reality is that most boaters never think twice about their anchor until they need it, yet it is one of the most important pieces of safety equipment and fishing gear on any boat. I can tell you with certainty that we will never take our anchor for granted!