



High Density Polyethylene Spade Rudders

Our vendor's spade rudders offer features unavailable from any other manufacturer, including unequalled resistance to water absorption, strength, durability and truly world-class performance through superior foil shape technology.

Along with these added benefits come some use and care criteria that can differ from those of a traditional foam filled fiberglass rudder.

The most frequent cause of original factory fiberglass rudder failure is crevice corrosion in the welded stainless steel post and web that provides the internal rudder structures. This is commonly caused by oxygen deprivation of the welded SS material at the weld site. Without oxygen, the stainless steel cannot adequately maintain the oxide layer that resists corrosion. Advanced crevice corrosion at the welded joints on the rudder post and web structure can then cause rudder failure.

By allowing the rudder to accept water when in use and drain freely when the boat is hauled, the rudder post welds in a Rudder Craft solid HDPE rudder are better able to resist the corrosive effects of saltwater by regaining the surface oxides. They last longer as a result.

The construction of our HDPE spade rudders involves encapsulating a high quality stainless steel post and web structure with our solid HDPE foil which has been both mechanically fastened to the rudder post and extrusion welded around it's perimeter. The fasteners used to mechanically bind the rudder blade to the post are installed from outside the rudder, leaving access ports in the rudder's sides as the rudder nears completion. As the rudder enters the final fairing stage, these access ports are filled with the extrusion welder, leaving a flush, fair surface. Fairing the bolt ports is done only to achieve a proper and fair foil shape, not to keep water out of the rudder.

Often, after the boat is hauled for the season, these ports can be noticed as areas of wetness, since small amounts of trapped water will sometimes drain from those ports. In the case of fiberglass rudders, this is a common sign of a waterlogged fiberglass rudder, so it is important to understand that this is not a defect in any way and is common and expected in the Rudder Craft solid HDPE rudder.

Additionally, unlike fiberglass/foam cored rudders, an HDPE rudder cannot absorb water, and does not delaminate from water intrusion. This is one of the major benefits of an HDPE rudder over a foam core rudder, since there is no worry about a "wet" rudder.

To help water escape when the boat is hauled, we suggest that, after bottom painting, installers drill two or three 1/4" diameter holes along the centerline of the rudder directly below the rudder post. This allows the rudder to drain thoroughly, allowing air to be drawn into the rudder and provide oxygen to the welded stainless steel rudder post. Subsequent painting operations should also ensure the holes are clear by using a drill of the same diameter after painting the rudder.

For more information, please feel free to contact Catalina Direct tech support at 916/843-1971. We're happy to help!