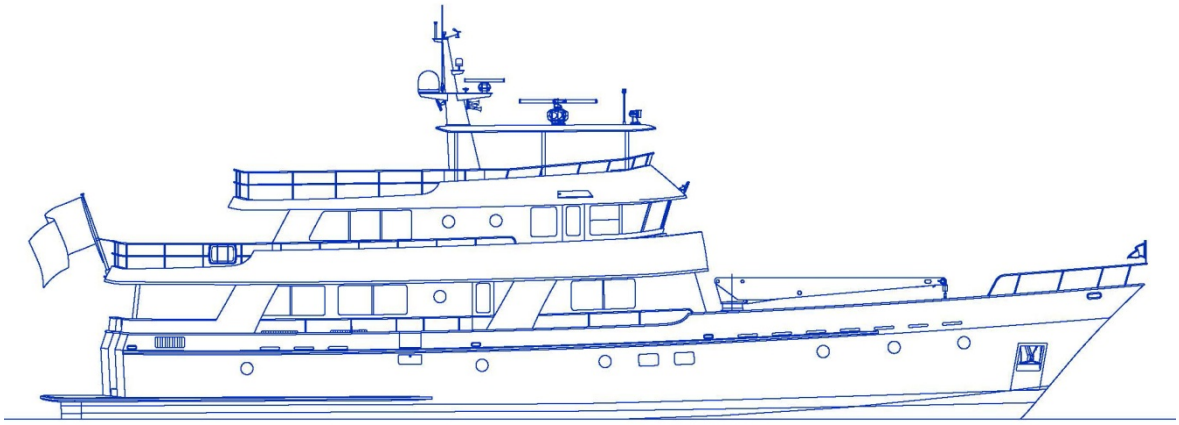
HUNT DESIGN



DESIGN COMMENTS

The **Hunt 106** can be described as a two-speed expedition-style yacht: she has the ability to cruise comfortably and efficiently at displacement speeds coupled with the capability of doing the same at low planing speeds.

Expedition yachts are generally burdensome vessels designed to operate at displacement speeds. For an expedition yacht with a waterline length of 100 feet this would mean 13 knots, or less. Hulls are usually round-bilged; bulb bows are common. Typical displacement might be 350 long tons; fuel capacity 8,000 US gallons. A properly designed vessel of this type will be quite efficient in the intended speed range.

We see prospective owners who find expedition yachts appealing but who want the ability to cruise at low planing speeds, say 17-18 knots. The difference between 13 and 17 knots seems small, but is not. For the 100-foot waterline vessel these speeds straddle the transition from displacement to planing – colloquially the hump condition – in which no vessel can operate efficiently. The 4 knot difference in speed necessitates an entirely different approach to the design and engineering of the vessel.

While the traditional expedition yacht is efficient at displacement speed, no amount of additional horsepower is going to push it to 17 knots. Efficiency evaporates very quickly. The speed increment from each additional horsepower rapidly approaches zero.

The hull form of the **Hunt 106** is hard chine, not round-bilged, and is optimized to run efficiently at low planing speeds. The vessel will not rise out of the water like a typical planing hull but will run nearly level, with stern lifted and without squatting. This is the result of the hull form as well as the use of interceptors, which add lift at the stern. For this application the hard chine hull has distinct advantages over the round-bilged. Static stability is inherently greater, eliminating the need for the bilge keels often added to round bottoms. The chine provides flow separation, reducing drag at higher speeds while increasing dynamic stability. Some deadrise is maintained all the way aft to ensure good tracking, while keeping transom immersion to a minimum for lower resistance at displacement speeds. Strong chines forward increase dryness and reduce wetted surface drag by separating water from the hull. A fine bow with high deadrise sections and slender waterlines minimizes wave-making. Propeller tunnels reduce draft and shaft angle, the latter increasing efficiency.

Necessarily, this is a lighter vessel: full load displacement is 140 long tons. Twin 1,700 BHP engines will give a top speed of 21 knots and a cruising speed of 18 knots.

There are trade-offs. The **Hunt 106** will not be the choice for the prospective owner whose overriding concerns are fuel economy and range. The **Hunt 106** will be marginally less efficient at displacement speeds and cannot carry as much fuel. On the other hand, the comparable 100-foot waterline round-bilged displacement vessel will never go 18 knots. The **Hunt 106** will be the choice for the owner who wants to take all his toys to a favored anchorage or cruising ground – and do it quickly.

Range will vary significantly with speed. Assuming ten percent reserve fuel, a total capacity of 7,500 US gallons gives a figure of 6,750 gallons for range estimates. Based on this, range at 17 knots would be approximately 900 nautical miles while range at 11 knots would be about 2,500 miles. Range numbers are always approximate and will vary significantly with ambient conditions.

The **Hunt 106** accommodates up to ten in the owner's party in three staterooms and a bunkroom. The owner's suite is on the 03 level aft of the pilothouse and opens directly to a private aft deck. Crew quarters provide accommodation for four, with comfortable lounge and galley. There are utility and storage compartments appropriate to such a vessel, including laundry and freezer rooms below and a walk-in pantry adjacent to the galley. Machinery spaces are large and permit good access to all equipment. The well deck forward can accommodate small boats up to about 27 feet in length. A Surfhunter 25 and a flats boat are shown. Additional small boats could be carried on the 04 deck aft of the mast.

Given her performance and her amenities one might say that the **Hunt 106** combines the best features of the conventional expedition-style yacht and the modern planing motoryacht.