VANGUARD = 1964 Model year

SPECIFICATIONS

Length Over All	321 - 6"
Iength Water Line	$22^{1} - 3\frac{1}{2}^{11}$
Beam	91 - 3"
Draft	41 - 611
Lead Ballast	4,230#
Displacement	12,600#
Height (bottom of keel to cabin top)	9" - 8"
Height on cradle	10' - 10"
Mast height from water line	42' - 9"
Location of bottom of rudder stock measured from ste	ern 10' - 0"
Keel extends forward horozontally measured from ster	rn 17' - 0"

VANGUARD CONSTRUCTION

Hull: The Vanguard hull is a single molded fiberglass reinforced plastic unit. It consists of a pigmented outer layer (gel coat) which is sprayed into the polished inner surface of the mold. A layer of $l^{\frac{1}{2}}$ oz. fiberglass mat is then spread out on top of the gel coat and completely saturated with polyester resin. Next a layer of 24 oz. woven roving fiberglass is spread over the mat and saturated with resin. Alternate layers of mat and woven roving are laid up and saturated in this manner until the hull is completed. To insure uniformity in the shape of the hull, all structural members and bulkheads are bonded into the hull before it leaves the mold. This process called "hand laying up" eliminates the possibility of "voids" or "dry spots" within the laminate. The combination of woven roving and mat fiberglass creates the strongest bond between laminates and thereby gives the greater shear strength. A completed hull carefully constructed in this manner has an inherent strength and resilience which can be found in no other material. Further - any shock or stress is transferred in all directions simultaneously thus minimizing the shock at any one point of contact.

Deck, cabin and cockpit: Like the Vanguard hull, the deck, cabin and cockpit is a single molded fiberglass reinforced plastic unit. The pigmented gel coat is sprayed into the polished inner surface of the deck mold. A non-skid pattern, part of the mold itself, becomes super imposed on the deck. This pattern is not a material that is added later. The method of laying up the deck is similar to that of the hull, however, a balsa wood core is incorporated between two layers of fiberglass laminate to achieve the necessary strength and stiffness as well as the light weight which is desirable in a deck structure. Although the balsa wood itself adds some strength to the deck the real strength lies in the separation of the laminate just as a steel "I" beam is stronger than a steel bar of the same weight. The balsa core also acts as an insulator against heat.

The smooth interior of the cabin is accomplished by means of a separate molded fiberglass unit designed to fit snugly inside the cabin trunk with the smooth side exposed. This unit is called a headliner and serves the purpose of giving the interior a clean finished appearance. After much of the interior work is done on the hull, and fittings installed on the deck, the deck is bonded to the hull with fiberglass cloth and mat all along the inside at the shear line. All structural bulkheads which were bonded to the hull while it was still in the mold are at this point bonded to the under side of the deck. The seam between the deck and hull is then filled from the outside with a thick epoxy resin to insure its water tightness and the teak cap rail is installed. A stainless steel rubrail is installed over the seam between the deck and hull.

Interior: The interior appointments and decor of the Vanguard are carefully selected to provide comfort and warmth with due emphasis on the maximum use of available space and ease of maintenance. Bulkheads, countertops and panels are covered with durable, easy to clean Micarta which is available in a variety of colors and patterns to satisfy individual taste. The natural teak cabin sole and trim provide a gentle touch of the traditional. All drawers are notched to stay closed regardless of the angle of heel.

The galley area provides a large self draining stainless steel sink and water pump. Teak racks give ample stowage for dishes while trap door lockers, drawers and opening lockers provide stowage for food and other gear.

On the starboard side a large icebox is installed which has separate compartments for food and ice. The trap door for the icebox closes flush with the counter top and in this manner provides a large chart table. Shelves for dishes and other miscellaneous gear are behind icebox.

Sleeping accommodations in the main cabin include a permanent upper berth and a pull-out transom berth on the port side, and a permanent lower on the starboard side with a unique canvas-bottomed upper berth with mattress that can be stowed completely away or left ashore altogether if not needed. The teak cabin sole is unusually wide giving a feeling of spaciousness to the entire cabin. There is abundant drawer and locker space throughout.

The head is in between the main cabin and the forward statercom. Utilizing the entire width of the hull the head area provides a marine toilet with seacocks, a fold-away wash basin and pump, a large hanging locker and shelf space on the starboard side and linen lockers on the port side. This unique arrangement affords the utmost space and complete privacy between the forward statercom and the main cabin. Two "Dorade" type ventilators and two opening port holes provide abundant fresh air.

The forward stateroom is equipped with two generous berths; Drawers and lockers provide abundant room for stowage. A large translucent hatch overhead provides light and access from the forward deck. Two opening ports provide both light and ventilation. All ground tackle can be stowed in the fore peak. The anchor line can be fed through a 3" deck plate forward. This deck plate can also be used for more ventilation by attaching a cowl vent.

Scuppers: All deck and cockpit scuppers drain out just below the water line through rugged fiberglass tubes molded into the hull. This arrangement allows water to drain off the decks and out of the cockpit without leaving stains on the topsides. Both seat hatches in the cockpit have deep angled gutters to keep water out of these compartments.

<u>Dorade type ventilators</u>: Two ventilators are molded in the deck with baffles to allow air but not water to enter. These ventilators known as "Dorade" type ventilators exhaust into the head area.

<u>Electrical system</u>: The electrical system consists of a 30 amp alternator and storage battery; a master waterproof - vaporproof switch; a switch panel; 8 well placed lighting fixtures; and side, bow and stern navigational lights.

<u>Power:</u> Universal Atomic 4 (30 HP) gasoline engine direct drive with 30 amp alternator, starter and reverse gear. The 7/8" bronze shaft drives 13" pitch by 8" diameter right hand propeller. The stuffing box consists of a cutlass bearing and the unique "Sealol Flexibox" seal to insure water tightness. Controls consist of a special side mounted reverse assembly which utilizes an ordinary #2 winch handle for a lever; a Rostand throttle control; a choke handle and an oil pressure gauge and ammeter.

<u>Ballast</u>: The ballast on the Vanguard is a 4230# lead casting which is sealed inside the shell of the hull and completely fiberglassed over.

Rudder and tiller: The rudder is of tapered mahogany fastened to a $1\frac{1}{2}$ " diameter bronze rudder stock with bronze bolts. Sections of the rudder are fastened with drift pins. The rudder port is a rugged fiberglass tube bonded to both the hull and cockpit which is sealed by means of an "Uscolite" bearing within the tube and a bronze rubber gasketed gland over the top. The tiller is laminated mahogany.

Deck hardware:

- 2 Bow Chocks Chrome plated
- 1 Bow Cleat $10\frac{1}{2}$ "
- 1 Bow Deck Flate 3"
- 2 Dorade Type Cowl vents with caps
- 2 Jib sheet deck blocks and plugs south coast 120-D 3"
- 2 Jib winches and handles south coast #3
- 5 Cleats 7"
- 2 Stern Chocks
- l Lazarette hatch vent 21"
- 2 Main sheet deck blocks south coast #118 and 119 3"
- 1 Main sheet winch top action #2 with handle

Spars:

- 1 Mast: 41coa Aluminum 6061T6 alloy anodized 7.5" x 4" x .188" length 36'
- 1 Boom: Solid sitka spruce 4 Diameter
- 1 Gooseneck crank roller reefing type
- 1 Clew outhaul screw type.
- 1 Jib halvard winch and handle #2

10.4

Mast Step and support: The mast on the Vanguard is stepped on top of the cabin trunk. There are many reasons for this arrangement aside from the obvious advantage of a clear unobstructed passage from the main cabin, through the head and into the forward cabin. Lack of a mast aperture in the deck eliminates the possibility of leaks around the mast. Stepping and unstepping the mast is greatly facilitated since the mast does not have to be lifted an extra six or seven feet and fed in through a small aperture. Tuning the rigging is easily done since the mast can be raked either forward or aft without adjusting a mast step on the keel. In the event of an accident in which a supporting shroud is severed the mast will ordinarily fall over the lee side with little damage.

The mast is stepped in a steel bridge which spans both of the structural bulkheads which form the "head" compartment. The bulkheads are reinforced further by cross beams and upright stanchions which are bolted to the marine plywood. This entire structure is designed to withstand a downward thwart of the mast much greater than the breaking strength of the shrouds will allow.

Standard Standing Rigging:

- l Jib Stay $\frac{1}{4}$ x l x l9 x 36' ll" S.S. with 1/2" turbuckle, $\frac{1}{2}$ " toggle
- 2 Upper Shrouds $\frac{1}{4}$ x 1 x 19 x 36' 6" S.S. with $\frac{1}{2}$ " turnbuckles and $\frac{1}{2}$ " toggles
- 1 Permanent backstay 7/32 x 1 x 19 x 40' 3" with 7/16" turnbuckle . 7/16" toggle
- 2 Forward lower shrouds $7/32 \times 1 \times 19 \times 18'-10\frac{1}{2}"$ with 7/16 turnbuckles 7/16" toggles
- 2 Aft lower shrouds 7/32 x l x l9 x l9' l" with 7/16' turnbuckles ' 7/16" toggles

Standard Running Rigging:

- 1 Jib halyard 3/16 x 7 x 19 x 36' and 7/16 Dacron Yacht Braid 42'
- 1 Main halyard 3/16 x 7 x 19 x 35' and 7/16 Dacron Yacht Braid x 35'
- 2 Jib sheet 7/16 x 38' yacht braid Ring Swivel #2 snap shackle
- 1 Main sheet 7/16 x 92' yacht braid 1 Boom Block South Coast #119
- 1 Main boom downhaul 3/8 x 12' yacht braid
- 1 SQ2 and SQB2 Tuph Blocks.
- 1 Topping lift 5/16 x 74' yacht braid
- 1 SS-2 Tuph Block
- 1 Flag halyard 1/8 x 80' nylon braid.

OPTIONAL EQUIPMENT

Yawl rig:

Mast

Boom

- 2 Iower shrouds $1/8 \times 1 \times 19 \times 14' 3\frac{1}{2}''$ turnbuckles
- 2 Upper shrouds $1/8 \times 1 \times 19 \times 17' 3\frac{1}{2}''$ Turnbuckles' 1 Mizzen halyard 3/32 7 x 19 x 19' - 0" S S. 5/16 x 23' Braid
- 1 Mizzen sheet 5/16 x 34' yacht braid/SQB2 2 SQ2 Tuph Blocks
- 1 Topping Lift 5/16 x 80' yacht braid 1 344 Shackle, 1 SQl Tuph Block

Mizzen Staysail Gear:

- 1 Halyard 3/8 x 40 yacht braid 1 SQ2 Tuph Block
- 1 Mizzen Staysail sheet 3/8 x 25' yacht braid #1 fasteye shackle 1 SQ2 tuph block

Genoa Gear:

- 2 Genoa sheets : $50 \, \text{xl/2}$ " yacht braid #2 ring swivel shap shackle 2 Snatch blocks #4 South Coast 108 2 Genoa Tracks $1\frac{1}{4}$ x 3/16 x 8' S.S.

- 2 Genoa Track Slides 14"

Spinnaker Gear:

l Spinnaker Pole

1/2" x 50' Braid #2 Ring Swivel snap shackle 1 Spinnaker Guy

1 Spinnaker Sheet ditto

1 Spinnaker halyard 3/8 x 50' Braid/2 #2 Swivel Snap Shackles 1 SS4 tuph block

1 Spinnaker pole lift 5/16 x 36' braid #1 SV Snap shackle SQ2 Tuph block 1 Spinnaker pole vang 5/16 x 35' Braid #1 swivel snap shackle

l Spinnaker track on mast $1\frac{1}{4} \times 3/16 \times 4$

1 Spinnaker pole eye slide 1 slide south coast #400 S-3

2 Snatch blocks #3 south coast

2 Saddles for snatch blocks

Bow Pulpit: All welded stainless steel rail around the bow provides safety for anyone forward handling sails.

Life Lines: Plastic coated stainless steel wire is supported by stainless steel stanchions with chromed bronze sockets. They can be attached forward either to the bow pulpit or to deck pad eyes so that they will not interfere with the jenoa jib. They run aft as far back as the aft part of the cockpit, thus providing safety for anyone going back and forth on the deck. A gate is located on the starboard side.

Stern rail: For complete safety the lift lines can run aft to an all welded stainless steel stern rail.

Miszen staysail gear: A halyard, black and sheet are necessary items when setting a mizzen staysail.

Halyard winches: $f \frac{\pi}{\pi} 2$ top action winch is installed as standard equipment at the base of the mast for the jib halyard. As optional equipment you may have installed an additional #2 top action winch for the main halyard or a #2 reel winch either of which helps a great deal in hoisting the mainsail.

Insulated Backstay and radio telephone ground: If one wishes to install a radio telephone it would be desirable to have an insulated backstay which can be used as an antenna and a Dyna plate on the keel for a ground.

Cowl vent: For added ventilation a cast bronze cowl vent is available which will fit into the three inch deck plate located on the forward deck.

Compass: A Danforth White 5" Constellation Compass can be mounted on the bridge deck; this compass has an electric light which operates off the main battery. It can be stowed inside on a mounting bracket in the main cabin.

Depth sounder: The transducer for this Wilfred O. White Transcentury Depth sounder is installed just forward of the lead keel. Since the unit operates on its own batteries the mounting is left to the owner's discretion.

Screens: Screens are available for all opening ports.

Table: This unique table folds up against the forward bulkhead of the main cabin. When folded up in this manner the exposed side is covered with the same Micarta finish as the bulkhead and is thus barely noticeable. When the table is extended the top of the table is the same as the counter tops. This arrangement makes it possible to use only one-half the width of the table as a serving shelf.

Extra winches: Two #3 top action winches mounted on pedestals are installed as standard equipment. Extra #5 or #3 top action winches are available and recommended if serious racing is desired.

Masthead light: Although not required by the Coast Guard a masthead light is available which for safety sake may be desirable when anchoring in a busy harbor.

Spreader lights: Flood lights located on the spreaders will illuminate the entire deck for changing sail and for many other uses at night.

Edson steerer: For those who prefer a wheel rather than a tiller an Edson pedestal steerer can be installed which is very sensitive and comes complete with a 5" constellation compass.

For other available optional extras send for current brochure and price list or contact your Pearson dealer.

NCTE: Items listed above may change periodically as improved equipment becomes available.