

BOAT REVIEW

SWAN 90

FLAWLESS

This ocean-going yacht is the biggest vessel to emerge from Nautor Swan's Finnish yard. Bill Biewanga went aboard the newly launched sloop to see if she lived up to her name



All photos by Ed Holt

Flawless's fully battened main and sail wardrobe are by North

Planned as a globe-trotting charter yacht of superlative quality, *Flawless*, the largest Swan ever built, was launched in September 1991. After a few hours of sea trials she was off from Finland to the Canaries, on to Antigua and later to continue to Fort Lauderdale, Florida and Spain for appearances at Expo '92 and the Barcelona Summer Olympics.

Designed by Frers, the Nautor-built 90-footer lives up to the high standards one has come to expect from Nautor Swan's facilities in Finland: beautiful accommodation and joinery down below, clean efficient lines and layout on deck and exciting sailing characteristics. But as a yacht of exceptional refinement, *Flawless* surpasses even Nautor's norm.

Hull construction is S-glass with polyester resin over a Divinycell core; there is appropriate Kevlar reinforcement in the bow and mid-section and additional Kevlar in the deck. An epoxy-tar barrier coat has been applied to the hull prior to painting in order to help reduce the possibility of osmosis.

An interesting variation to the usual lamination schedule is that no gelcoat is being used. It was believed that the dark blue colour intended for the boat would exaggerate 'print-through', where glass fabric patterns begin to show through to the surface. This is due to the higher surface temperatures produced on a dark colour during the first several years of post-cure. The intention is that *Flawless* will be refaired and repainted every 24 months in order to maintain her stunning appearance.

A large deckhouse contains the navigation station and interior steering station. The sleek lines, additional light

and ample room provide an aesthetically pleasing, dry, convenient place for discussing the watch change, running the vessel in heavy weather or sipping iced drinks shaded from strong tropical sunshine. Unlike her sisterships, the Swan 86s, *Flawless's* reverse transom has been changed to include transom steps to a swimming platform, and the freeboard at the bow has been increased by 14in and tapered back to give more headroom below and drier decks in a seaway.

Each of the guest cabins is equipped with its own intercom which connects to the ship's radios, its own mini-bar refrigerator, central ventilation, thermostatically controlled air conditioning, a TV monitor that can access any one of four VCRs capable of utilising any format video cassette, audio cassette deck, a B&G 690 MFD (multi-function display), VacuFlush head and separate shower stall. The bunks are equipped with proper lee cloths with multi-purchase tensioners to ensure that guests and crew can stay in their bunks in virtually any sea conditions.

Sufficient handholds are located throughout the boat; the corners on the furniture are rounded for safety, and a braided line is rigged through the main saloon for use on a beat or in a seaway. And for those guests who can't get enough television, there are two 4x5ft projector screens that also interface with the various VCRs. When not watching television, however, there is a spot-lighted 'fish window' in the main saloon for a view, day or night, of the scenery beneath *Flawless's* hull.

Mechanical systems throughout the vessel are equally well-thought-out. In

the engine room the six-cylinder 292hp Volvo engine is quite accessible from all sides, making for easy routine maintenance. The front of the engine, with its alternators and power take-offs, is accessible under the main companionway.

The Volvo drives a three-bladed, feathering Maxprop to yield 10.7 knots of boat speed at the top end or 8.2 knots in a more fuel-efficient range, consuming four gallons of diesel per hour.

Cruising speed is generally between 9 and 9.5 knots while under power. The prop shaft is fitted through a dripless ceramic PYI packing gland for a long-lasting, watertight through-hull

Natural light in the main saloon is admitted through the large deckhouse windows





Designed with a bulbed keel by German Frers, Flawless is capable of an exciting sailing performance

connection of the drive train. Tankage for the vessel consists of 3,000 litres of fresh water, 2,400 litres of fuel in permanent tanks, and three fuel bladders of 300 litres each for periods of extended cruising.

To augment the fresh water supply and ensure that there is plenty to spare for the various showers and ice-makers, the MT Freshwater water-maker has a five ton per day capacity which translates into approximately 227 litres per hour. Primary source of electricity is the Northern Lights 30kW generator, considered one of the most reliable on the market. While the Victron battery charger keeps the batteries up to their 800 amp capacity, the 3kW and 1200 watt Victron inverters can change the 24V power into 220 or 110. The batteries are in two banks: radio and service.

Extended, elegant cruising is the mission statement for *Flawless*, and her refrigeration system is a reflection of that goal: a large front/top loading freezer in the galley plus two refrigerators, a fridge/ice maker in the wet bar and a refrigerated mini-bar in each of the guest cabins.

To keep all this equipment humming along quietly, an extensive sound-deadening campaign was enforced. All pumps, compressors, motors, fans and

generators are each rubber-mounted to independent mounting brackets in order to eliminate transmitted noise and vibration. The generator has its own sound insulation and, of course, there is the standard lead insulation surrounding the entire engine room amidships.

Forward, there is a workshop area which contains, in addition to the usual workbench and tools, the Meile clothes washer/dryer, the sewing machine and the embroidery machine; all guests will receive their own personalised embroidered shirts! Also located forward to help manoeuvre the large vessel and all its equipment is the hydraulic 25hp non-swivelling retractable Richfield bow thruster.

Flawless has seven separate hydraulic systems. In addition to the bow thruster, there is the Navtec system to aid sail shape control as well as positioning the commercial Furuno radar scanner, a complement of Lewmar hydraulic winches, Reckmann roller furler, stern door, anchor windlass, and power steering with Cetrek autopilot.

As a safety device for this hydraulic power, disconnect knobs for all the hydraulic systems are located at both the interior and cockpit steering stations: pull one knob out and all the hydraulic systems remain stationary.

Furuno gyroscopic compasses are used for steering and operating the Cetrek autopilot: no more variation and deviation to take into account except with the B&G fluxgate compass that interfaces with the 690 System and its large, clear 20/20 displays. Also located in the deckhouse nav station is the Furuno 1510 plotting radar, the Furuno DFAX weatherfax, the Skanti TRP 7000 SSB radio and the Shipmate VHF.

For nosing into remote anchorages with maximum confidence, *Flawless's* sonar scans 200ft in front of the boat. To make long hours at the helm a bit more comfortable, the seat in the interior steering station is gimballed and shock-absorbent.

But despite the lavish interior and the state-of-the-art equipment, the real point of being on a Swan is for the sailing, and the deck layout is as businesslike as the accommodation is sumptuous. Fairlead blocks screw into flush-mounted base plates and can be removed when not in use. Hatches are recessed into the teak decks so that the water runs over them, and the recesses are equipped with scuppers.

The recessed hatches and flush-mounted base plates also help to reduce snagging sail bags during deck

CONTINUED OVERLEAF

BOAT REVIEW



Boat and sails can easily be controlled from the cockpit



The comfortable deckhouse with navigation station to starboard



All cabins are equipped with TV, video, fridge and mini bar

work. Down below, the hatches have screens and shades so that at sea the off watch can sleep during the day and, at anchor, rooms can be ventilated without insects joining the party.

The Nautor rig comes equipped with the Harken BattCar System to make hoisting, reefing and lowering the main easier in all conditions. Sparcraft track, cars and end fittings complete the inboard end of the spinnaker pole system.

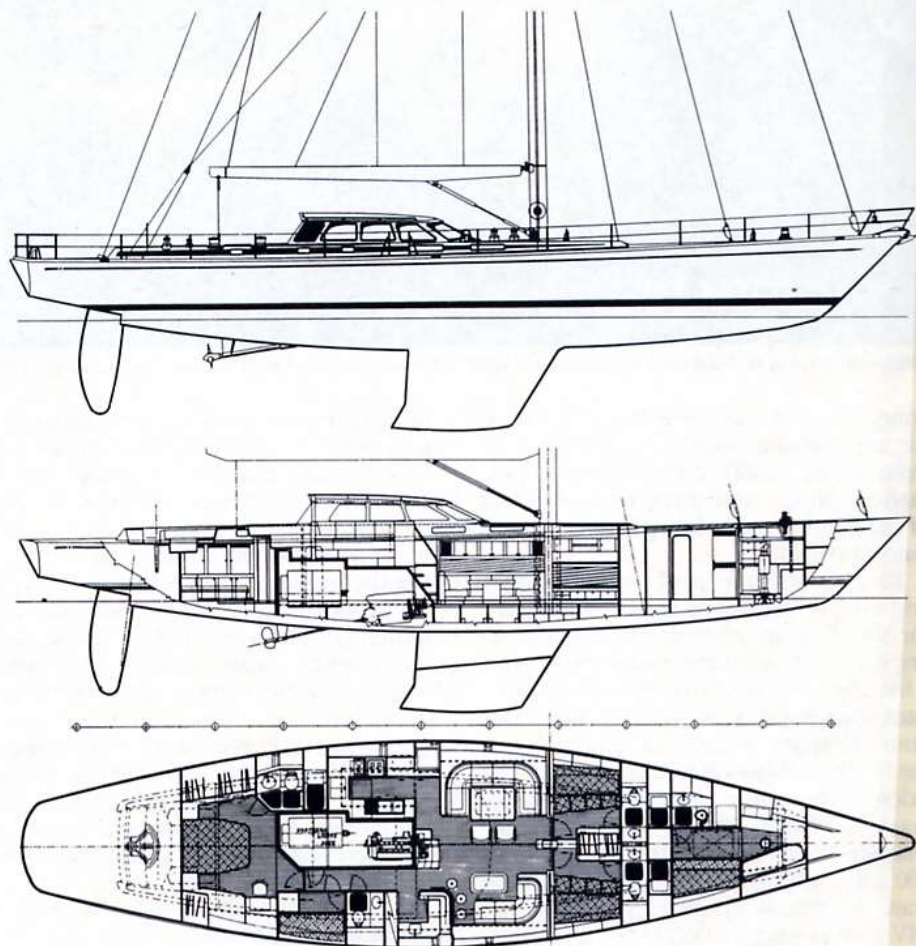
Lazyjacks are rigged to the boom to help gather the foot of the main as it is dropped with its full-length battens, and Delrin chafe strips along the side of the boom help to ensure that the equipment will be easily maintained.

The multi-purpose spinnaker is hoisted from its own well on the bow. The MPS is complete with a spinnaker 'sally' sleeve that allows for controlled unfurling and dousing of the sail by minimum crew. Lazy running backstays are brought forward by lines led through blocks at the cap shrouds to cut down on the number of trips that need to be made forward along the leeward rail. Boat and sails can be controlled from the cockpit.

Running rigging is all Gleistein Spectra line using Sparcraft No 10 shackles on the halyards and custom maxi shackles on the sheets with Harken blocks throughout.

Much of this equipment is used on maxi racers where similar loads are experienced, but while cruising, *Flawless* is unlikely to be pushing herself to the limits so a very high degree of reliability and safety is built into the system. But when she is unfettered and the limits are approached, the high performance bulb keel gives a great sailing performance while keeping the draught of the vessel to 11ft 6in (3.5m).

Flawless is undeniably a work of art, the culmination of an effort between an uncompromising yacht owner, a



knowledgeable skipper and an exceptional builder.

Contact: Parties interested in chartering *Flawless* can contact Neil Cheston or Lars Bjorklund of BC&R, 25 Rue Auberon, 06600 Antibes, Côte d'Azur, France Tel: (33) 93 34 92 45 or Fax: (33) 93 34 84 25.

Bill Biewanga is an experienced yachtsman and freelance journalist who has skippered large yachts and taken part in many ocean races, including the Whitbread. He lives in Newport, RI.

Dimensions:

LOA	90ft 0in	27.28m
LWL	70ft 0in	21.10m
Beam	20ft 4in	6.20m
Draught	11ft 6in	3.50m
Disp	126,000lb	57,000kg
Ballast	44,000lb	20,000kg
Sail area:		
Main	1,430ft ²	133
150 per cent genoa	2,441ft ²	227
Spinnaker	5,889ft ²	544

Engine: six-cylinder Volvo 292hp