SWAN 65

SPECIFICATION FOR THE SWAN 65 GLASSFIBRE IOR SLOOP AND KETCH

Dimensions:

LENGTH OVERALL, KETCH	64' — 8"	(19,7 m)
LENGTH OVERALL, SLOOP	65' — 1"	(19,8 m)
LENGTH OF WATERLINE	47' — 0"	(14,3 m)
BEAM	16' — 4"	(4,9 m)
DRAFT	9' — 3"	(2,8 m)
DISPLACEMENT	57.400 lbs	(26.000 kg)
BALLAST	23.500 lbs	(11.577 kg)

Designer: SPARKMAN & STEPHENS INCORPORATED

Builder:

NAUTOR

OY WILH SCHAUMAN AB

PIETARSAARI, FINLAND
TELEPHONE: 18 204, TELEX 75—47 nauto sf

Note. These specifications are believed to be correct at the time of printing. Nautor will do its utmost to make sure that the vessel is built according to them. However, there may be minor alterations on the finnished yachts, and we reserve the right to make these without prior notice.

September, 1974

GENERAL CONDITIONS
These specifications are intended to supplement the design.
While details may be changed as the result of experience in construction or use of the yachts, the standards of quality and completion are maintained to furnish a yacht ready for service.

The Owner or his authorized agent will have access to the yacht and everything pertaining to the yacht at all reasonable times. Every facility will be afforded inspectors for the prosecution of their work.

The Builder reserves the right to approve or reject any changes in the construction of the yacht when these are asked for after the yacht is ordered.

The Builder guarantees skilled workmanship, in keeping with the best yacht practice and in conformity with specifications.

INSURANCE — The Builder will maintain insurance on a yacht contracted for by an Owner, including all items furnished or delivered by Owner, appropriate to the value of the Owner's investment until the yacht is delivered to the Owner in Pietarsaari harbour or dispatched by road or train.

DAMAGED WORK — The Builder will protect all work and be responsible and make good any or all damage from whatever cause, to any part of the yacht or its equipment of furnishings.

CLEANING — The Builder will at all times keep the yacht reasonably clean throughout. Particular care is taken that all chips, shavings, and other foreign matter are removed and all parts cleaned before application of paint, and that when the yacht is delivered, her bilges and pockets are free from such matter.

ACCESS TO COMPARTMENTS — Arrangements for access to and for cleaning out and painting all compartments and all parts of the vessel are provided wherever practical. Floorings are fitted with suitable hatches.

Access to the engine, steering gear, and all other equipment that may require services of any kind will be provided.

Care is taken in locating pipes and other parts to avoid blocking of access. If necessary, removable sections are utilized.

TESTS — The standard machinery will be operated to the satistaction of the Builder with the yacht in the water, running continously for one hour and at as much speed as is practicable without undue heating. Steering and reversing tests will also be run. All standard auxiliaries such as pumps etc. are thoroughly tried out.

The yacht will be properly rigged with standing rigging.

During tests, the yacht is at all times in the care, custody, and control of the Builder.

WARRANTY — If any defective workmanship and/or materials are discovered within six months after delivery, except for the Owner-furnished items or installation of same, or unless due to negligence or other improper act of the Owner or any other user of the vessel, the Builder shall accept responsibility thereof. Under such circumstances, the Builder shall either procure the repair or authorize such a repair to be made in a way agreed upon in writing between the parties. The Builder shall not be responsible for any proprietary articles which shall bear the customary guarantee of the manufacturets.

HULL CONSTRUCTION

GENERAL — Scantlings, materials, and workmanship throughout are consistent with the construction of a light hull but without any sacrifice of strength or stability.

GLASSFIBRE CONSTRUCTION — The GRP hull does have scantlings as approved by Lloyd's Register of Shipping, and the yachts are delivered with Lloyd's Certificate of Hull Construction.

COLOUR PIGMENTS — The colour pigments are of an approved type and will be used only in the gelcoat in the deck, deckhouse, cockpit, topsides, and boot top.

HARDWARE AND FASTENINGS — Hardware and fastenings will be marine type above deck with quality finish.

BALLAST — The ballast keel is a lead casting with antimony.
Keel bolts are stainless steel.

KEEL PLATES — Stainless steel docking plates are installed on keel.

LIMBER HOLES — Limber holes are cut where necessary so that all water will drain to low point.

BILGE ACCESS — Maximum possible access will be provided to all portions of the bilge.

ENGINE BED — Of GRP. Special care is taken to assure rigid foundation and proper adhesion to hull.

BULKHEADS (STRUCTURAL) — Structural bulkheads are of marine grade water-proof plywood, butts and seams are secured with tong and grove joints.

CHAIN PLATES — are stainless steel flat bars thru-bolted to brackets matted to hull.

TOE RAIL — Aluminium, anodized.

MAST STEPS — Galvanized steel.

RUDDER — The rudder is fibreglass.

RUDDER STOCK — Stainless steel with stainless steel gudgeons and pintles with nylon bushings.

STEERING — Steering of rudder is by a steering wheel mounted on aluminium pedestal steerer connected with quadrant by cable and sheaves.

Steerer has sprockets and non-magnetic chains leading to steering cables. Cables are stainless steel wire rope. Sheaves for cables have a score diameter of not less than 20 times the diameter of the wire rope.

Steering gear in general and especially within four feet of the compass consists solely of non-magnetic materials. Sheaves and fairleads are securely fastened to the hull. All sheaves and sprockets are fitted with guards to prevent cables or chains from becoming jammed.

EMERGENCY TILLER — is stainless steel pipe.

CLEATS — MOORING & TOWING — All mooring and towing cleats are securely thru-bolted to deck blocking as follows:

Four 16" light alloy mooring cleats mounted on foredeck.
Two 16" mooring cleats each side amidships.
Two 16" light alloy towing cleats mounted on after deck.

CHOCKS — installed in each rail forward, midships and aft.

STEM FITTING — is stainless steel welding with female socket for pulpit stanchion.

DRAFT MARKS — Marks of suitable size are installed on the centerline of the yacht at forward and after ends 12" above designed waterline.

EQUIPMENT

COMPASS AND BINNACLE — One C654C Danforth compass mounted in dome type binnacle on steering pedestal, with low lighting, 45° lubber lines white on black with 5° card light connected to rheostat.

LIFE RAIL — Double life lines installed. Stanchions of stainless steel tubing, bases securely bolted through deck. Top life lines of stainless steel wire, white plastic covered, set up with turnbuckles at after ends.
Lower life lines are similar.

Pushpit and pulpit installed, fabricated of tubing similar to what is used for the life rail stanchions. Side lights and stern light are standard. Height of pushpit, pulpit and stanchions, spacing and distance does conform to ORC reguirements.

COVERS — Dacron hoods for hatches held in place by aluminium tracks on three sides.

SPRAYHOOD — Folding sprayhood is installed over the companionway.

MATTRESSES AND UPHOLSTERY — Mattresses are flexible foam. All mattresses have covers and are fitted with zippers.

FLAG POLE — One pole for ensign, with socket at stern.

GARBAGE CONTAINER — Plastic type, installed in galley.

JOINER WORK

GENERAL — All joiner work is done in accordance with the best yacht practice.

Corners of hatches, bureaus, seats, dressers etc. are rounded.
All projecting corners of partitions are rounded.
All mounting blocks, rails, door sills etc. are fastened with screws or glued.

Hooks, lanyards, and bumbers are installed to control the swing of doors.
Suitable catches are installed to hold the toilet and state room doors full open.
Kick plates on steps, chafing pieces on sills installed.

JOINER HARDWARE — All fittings and hardware are of marine type.

CABIN SOLE — Laid teak veneer. Sole fitted with traps for access to bilge.

WINDOWS AND PORTS — Windows in sides of cabin trunk are fixed type. Cockpit well has one opening port to owner's cabin. One opening port in aft toilet.

THREE DECK HATCHES — one for each of the two guest cabins forward

and one in main saloon, large enough to permit passing main engine. Aluminium framing with grooved sill piece for cover.

FORECASTLE HATCH — This hatch is large enough to permit passing sails and sail bags. Sliding type hatch with aluminium tracks on three sides to take hood.

COMPANIONWAY HATCH — Sliding type with perspex top, sliding under fibreglass hood, fitted with lock and two keys supplied.

LAZZARETTE HATCH — is located in aft cockpit seat, hinged fibreglass type with securing clamps.

STERN DECK HATCH — Provided on ketch.

ENGINE ACCESS — Access to main engine is through removable joiner work.

DROP SLIDE — Drop slide is supplied for the main companionway hatch. The slide is fitted with louvres and has provisions for locking.

LADDERS — Wood frame ladders with rubber treads installed at companionway hatch.

SHELVES, DRAWERS AND LOCKERS — are arranged throughout quarters. Hanging lockers have rods. All drawers have guides and are of type that must be lifted to open.

BERTHS — Fixed berths, transom berths, and built-in berths have drawers or traps under. All except forward berths have canvas leeboards.

TABLE — One drop leaf table, located in main cabin.

CHART TABLE — A chart table is installed with stowage for charts under top of table.

DOORS — Doors and panelling throughout are plywood. Locker doors have louvres for ventilation of locker spaces where possible. Sliding doors installed on dish racks.

HAND RAILS — Hand rails are installed below decks.

MIRRORS — installed in all heads.

GALLEY — Galley is equipped with gas stove, sink, refrigerator, and deep freeze. Counter tops are Formica or equivalent. Galley is amply provided with racks for glasses and dishes, shelves, bins, and cutting board.

STOVE — One gas stove, with oven, mounted on gimbals in galley space, which is asbestos insulated and sheathed with stainless steel. Gas container mounted in tight box with drainage out through hull. Copper line between stove and container.

REFRIGERATION AND DEEP FREEZE UNIT — Built-in type, lined with fibreglass and insulated with foam. Insulation is 4" thick. Shelves provided. Top opening flush hatch with flush lifting hardware.

VENTILATION — Natural air intake vents for living quarters are through 5-inch diameter cowl vents on Dorade type watertrap boxes. Cowls are clear of operation from all winches.

SOUND INSULATION — The inside of the engine hood is lined with sound insulation. Particular care is taken to install insulation to the fullest extent to muffle engine noises.

PAINTING

GENERAL — All materials are applied in accordance with the manufacturer's latest instructions.

TOPSIDES AND TRANSOM — Standard colour white.

COVE STRIPE AND BOOT TOP — Standard colour blue.

BOTTOM — Primed with antifouling bottom paint.

CAPIN SOLE — Teak veneer, oiled.

PLUMBING

SEA COCKS — Bronze sea cocks, installed on all thru-hull connections below waterline. All openings finished flush with outside of hull.
Inboard side of sea cocks fitted with hose nipple to take hose having two stainless steel hose clamps at each connection where possible. Sea cocks accessible and combined wherever feasible to minimize the number of thru-hull openings.

SCUPPERS — There are four scuppers through toe rail on each side.

The cockpit well has two scuppers, one on each side. All scuppers drain naturally.

FRESH WATER TANKS — 9 tanks for a total capacity of 1.500 liters are provided. They are fitted with sufficient handhole plates to allow thorough cleaning. Suitable baffles provided.

Tanks are filled through a single fill pipe with fill plate on deck marked "WATER". Vents emptying into overflow piping, discharging into the galley sink.

PIPING (FRESH WATER) — All fresh water piping is copper or nylon tubing.

TOILETS — Three Blake toilets, with white seat and cover, installed in toilet rooms. Discharge through a loop, and an accessible sea cock. Toilet intakes are located very close to keel to ensure ample submergency even in heavy weather.

TOILET ROOM FIXTURES — Toilet rooms are suitably fitted with medicine cabinet, towel bar, soap dish, and paper holder.

WASH BASINS — One fibreglass wash basin is installed in each toilet room. Basin discharges into sump tank. Telephone type shower installed. A diaphragm pump is provided to discharge sump tank.

GALLEY SINK — A double stainless steel galley sink is installed in galley counter top. The sink is fitted with a foot-operated pump with gooseneck spout for salt water. Electric pressure pump is provided for fresh water system with an auxiliary foot pump in galley. A 45 liter dual system (220 V and engine bypass) hot water heater is provided. The sink discharges directly overboard through a sea cock.

BILGE PUMPS — Two diaphragm type hand pumps are installed.
One pump located in cockpit well, second pump located below decks. Suction lines terminate in accessible flexible section protected by foot strainer.
Discharge above waterline.

MACHINERY

MAIN ENGINE — Volvo Penta Marine Diesel Engine, model MD 32 A, rated at max. 106 hp at 4.000 rpm. The engine is equipped with hydraulic reduction gear 2,1:1 and fitted with two alternators.

CONTROLS — Single lever Morse control operated from helmsmans position.

REFRIGERATION COMPRESSOR — Electric driven compressor with holding plates for icebox and deep freeze compartment.

FUEL TANKS — 5 tanks with a capacity of approximately 1.000 liters. The tanks have two fills, located on deck marked "FUEL". Fills have oil-resistant hose with stainless steel hose clamps at the connections.

FUEL SYSTEM — Copper fuel lines with shut-off valve before fuel separator and flexible section connected to engine.

PROPELLER AND SHAFT — Propeller is of two-bladed folding type, of bronze, diameter 20". Shaft is Monel or equal 38 mm diameter.

— **SHAFT BEARING, SHAFT TUBE AND STUFFING BOX -** Strut bearing is a Cutless rubber bearing inserted in strut. Stuffing box is connected to stainless steel stern tube with hose and hose clamps of stainless steel.

MAIN ENGINE EXHAUST SYSTEM — Consists of a water jacketed section, muffler, exhaust hose, and thru-hull fitting. Discharge through topside above water line. Cooling water is connected to water jacket and discharges from water jacket to muffler.

DRIP PAN — An oiltight fibreglass pan is installed under engine.

ENGINE COOLING — Cooling water is taken through a sea cock located low down to ensure ample submergence when heeled. The water is passed through a suitable basket strainer hose, of proper size, to engine.

ELECTRICAL

24 V WIRING — 24 V DC two-wire, ungrounded system throughout. Controlled by a circuit breaker switchboard with adequate number of circuits.

STARTING BATTERY — Two 12 Volt batteries, connected in series each rated 105 amperehours, are mounted in fibreglass-lined tray, charged by 35 ampere alternator.

LIGHTING BATTERIES — Six 12 Volt batteries, connected in series/parallel each rated 105 amperehours and mounted in fibreglass-lined tray, charged by auxiliary 75 amp alternator.

ELECTRICAL ARRANGEMENT — The following equipment is supplied:
Mast head light
Bow light
Deck flood light (another one on ketch mizzen mast)
Red and green running lights
Stern light
Compass light
Bunk lights
Navigation table light
14 dome lights
5 exhaust blowers are supplied in heads, galley, and engine room.

CHARGING SYSTEM — Starting and lighting batteries are on separate current draw system. There are master switches on the positive side of the system.

LIGHTNING PROTECTION — Heavy wire connected to chain plates, backstay fittings, and headstay fittings, grounded to ballast keel bolts.

SPARS

GENERAL — Scantlings of all spars are within S & S specifications. Spars are anodized.

MAIN MAST — is made of aluminium alloy, hollow, oval section. Mast is fitted with stainless steel tangs for attachment of rigging.

Mast is wired for masthead light, bow light, deck flood light, with wires leading down inside of mast. Mizzen mast on ketch similar.

MAIN BOOM (ROLLER REEFING) — is aluminium alloy, hollow, round section, with screw clew outhaul.

MIZZEN BOOM — Aluminium alloy, hollow section.

SPINNAKER POLES are aluminium alloy, hollow, round section.

JOCKEY POLE (REACHING STRUT) — is aluminium alloy, hollow, round section.

SPINNAKER TRACK — Stainless steel spinnaker pole track on mast with two cup sliders and cups. Hoist mechanism for sliders.

MAST COLLAR — Aluminium mast collars are made with beaded lip to take lowe edge of mast coat.

RIGGING AND FITTING LIST

GENERAL — Standing rigging is stainless steel wire with Norseman end fittings. Special adjusting handles are supplied to permanent backstay turnbuckle. All turnbuckles are bronze.

Sloop and ketch rigs have a removable staysail stay and running backstays.

WINCH LIST

Genoa sheet winches	Two Lewmar No. 65
Spinnaker sheet winches	Two Lewmar No. 65
Main sheet winch	One Lewmar No. 43
Genoa halyard winches	Two Lewmar No. 45
Spinnaker halyard winch	Two Lewmar No. 45
Main halyard	One Lewmar No. 3
Foreguy and vang	Two Lewmar No. 43.

ADDITIONAL WINCHES ON KETCH MIZZEN RIG

Mizzen halyard	One Lewmar No. 1
Mizzen staysail halyard	One Lewmar No. 40
Mizzen staysail sheet	One Lewmar No. 40
Mizzen sheet	One Lewmar No. 40

WINCH HANDLES	Quantity
Double, lock-in	Six
Single, lock-in	Two

8 winch handle holders provided.

RUNNING RIGGING

Wires are of 7x19 construction, ropes Trevira. Main and mizzen halyards with shackles.
All other halyards as well as spinnaker sheets and guys with snap shackles.

Description	Quantity	Material	Diameter
Main sheet with blocks	One	braid	16 mm (5/8")
Heavy genoa sheets	Two	braid	20 mm (3/4")
Medium genoa sheets	Two	braid	16 mm (5/8")
Light genoa sheets	Two	braid	12 mm (1/2")
Heavy spinnaker sheets	Two	braid	16 mm (5/8")
Medium spinnaker sheets	Two	braid	12 mm (1/2")
Light spinnaker sheets	Two	braid	8 mm (5/16")
Aft guys	Two	braid	20 mm (3/4")
Foreguy	One	braid	16 mm (5/8")
Main boom topping lift	One	wire	4 mm (1/6")
Tail end with blocks for above	One	nylon braid	8 mm (5/16")
Main boom downhaul with blocks	One	braid	12 mm (1/2")
Running backstays	Two	wire	9 mm (3/8")
Tail end with blocks for above	Two	braid	16 mm (5/8")
Spinnaker halyards with blocks	Two	braid	20 mm (3/4")
Genoa halyards	Two	wire	8 mm (5/16")
Tail end for above	Two	braid	14 mm (9/16")
Main halyard	One	wire	8 mm (5/16")
Staysail halyard	One	wire	6 mm (1/4")
Tail end for above	One	braid	12 mm (1/2")
Heavy boom vang tackle	One	braid	12 mm (1/2")
ADDITIONAL ON KETCH			
Mizzen halyard	One	wire	5 mm (1/5")
Mizzen staysail halyard	One	braid	12 mm (1/2")
Mizzen sheet with blocks	One	braid	12 mm (1/2")
Heavy mizzen staysail sheet	One	braid	12 mm (1/2")
Light mizzen staysail sheet	One	braid	10 mm (3/8")
Light boom vang tackle	One	braid	10 mm (3/8")

STANDARD EQUIPMENT ALSO INCLUDES

Docking lines, 20 m each	Four	Nylon	16 mm (5/8")
Docking lines, 20 m each	Two	Nylon	20 mm (3/4")
Anchor rode, 50 m	One	Nylon	25 mm (1")
18' chain and shackle	One		12 mm (1/2")

60 lbs Danforth anchor stowed below deck
75 lbs CQR anchor stowed on stemhead fitting
35 lbs Danforth stowed as directed
Six large snatch blocks
Two genoa fair lead cars
Two slide cars with separate stoppers
Two double foot blocks
Shroud rollers on main and forward lower shrouds
Fenders — six large with lines
Boat hook
Flag staff
Pig stick
Two Bosun's chairs
Four jib pad eyes with two blocks
Spinnaker aft quarter fittings
One half model of hull