SWAN51

PRELIMINARY
STANDARD SPECIFICATION

GENERAL INDEX

PRELIMINARY STANDARD SPECIFICATION

Dimensions

Length of hull	15.55 m	51.02 ft
LOA	16.90 m	55.45 ft
LWL	14.67 m	48.13 ft
Beam max	4.85 m	15.91 ft
Draught (light)	2.45 m	8.04 ft
Displacement (light)	18000 kg	39700 lbs
Ballast, standard keel	6300 kg	13900 lbs
Yanmar 4JH80	58.8 kW	80 Hp

Rig and sail dimensions

IG	20.70 m	67.91 ft
J	6.10 m	20.01 ft
P	19.90 m	65.29 ft
E	6.70 m	21.98 ft
TPS	TBD	

Sail areas

Fore triangle	63.1 m^2	679 sq.ft
Main sail	80.0 m^2	861 sq.ft
Jib	67.1 m^2	722 sq.ft
Gennaker	TBD	

Tank capacity

Fuel	650 L	172 US gal
Water	500 L	132 US gal
Hot water	40 L	10.5 US gal
Holding tanks	100 L	26.4 US gal

Battery & power sources

Service battery, AGM	24V 340Ah (20h)
Starting battery, AGM	12V 50Ah
Shore power	230V 32A 50Hz
Battery charger	70A

Naval Architect

GERMAN FRERS

Construction Approval

CE-approval: Category A Ocean

Builder

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00 GENERAL CONDITIONS

The specification is believed to be correct at the time of printing and supersede any previous versions or translations to other languages.

The specification is to be read in conjunction with the sail plan, deck drawing and interior layout. Details may be changed as the result of experience in construction or use of the yachts.

The Builder reserves the full right to substitute any equipment, materials or components within this specification with any functionally equivalent equipment, materials or components without prior notice.

The Builder guarantees skilled workmanship, in keeping with the best yacht practice for a vessel this size and in conformity with the specifications and drawings.

Main dimensions, Displacement and Ballast refer to a standard yacht, which is built to the specification for such standard yacht. All draught dimensions are approximately and referenced to DWL. Optional equipment and customization can affect these values and relative performance of the yacht.

00.01 Commissioning

01 Documentation

Builder's Certificate

A Builder's Certificate is supplied when full payment according to contract has been received.

Bill of Sale

A Bill of Sale is supplied, if needed, when full payment according to contract has been received.

The Bill of Sale verifies that there are no liens on the yacht.

Certificate of Delivery

A Certificate of Delivery is to be signed by both parties at the time of the acceptance.
The Certificate of Delivery signifies the formal transfer of ownership and simultaneously commences the warranty period at the given date.

Warranty

The warranty period for the yacht is two (2) years from the date of delivery.
For purchased items, equipment or systems, the Builder provides the necessary documentation for proof of ownership, warranty and any other documentation and/or manuals as supplied.

00.02 Tests and trials

The correct and safe function of onboard installations and systems are verified by testing as appropriate for each individual yacht.

The requirements for test approval are based on safety, functionality, performance and reliability as demanded by the yacht's specification, current regulations and the yards high standards.

Testing and trials are done in order to secure realistic data, meeting or exceeding demanding criteria.
Records of testing are kept on file at the yard for future reference.

00.03 Trim

The Builder reserves the right to adjust the ballast for trimming purposes.

The flotation of the yacht, built to this standard specification, will correspond to the displacement calculated by the builder. The side trim tolerance for the yacht, built to this standard specification, is +/- 0.5° and the longitudinal trim tolerance for the yacht, built to this standard specification, is +/- 0.1°.

00.04 Construction approvals

CE-Approval Category A Ocean

00.05 Hull identification

The model and hull number are shown on the Builder's Plaque and on the WIN-code (Watercraft Identification Number) on the starboard upper corner on the transom.

00.06 After sales service

Nautor provides unique technical support and worldwide spare parts service. Records are kept of Nautor's Swans and of the drawings used to build them.

01 HULL

00 General

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

01.01 Laminate

00 General

The hull topsides are foam cored glass fibre reinforced vinyl ester construction. Hull bottom is monolithic for increased impact resistance.

01 Layup

The hull layup is vacuum assisted vinyl ester resin infusion in a female mould.

01.02 Stiffening

01 Stiffeners

All transverse- and longitudinal stiffeners are glass fibre layups with unidirectional fibre reinforcements on tops. Engine bed is integrated in the GRP bottom grid and has steel inserts for bolts. Special care is taken to assure rigid foundation and proper adhesion to hull.

02 Structural bulkheads

Forepeak and lazarette structural watertight bulkheads are built in a sandwich construction of foam core and glass fibre reinforced vinyl ester laminate.

Other structural bulkheads are of marine plywood.

03 Chain plates

Stainless steel headstay-, main shrouds- and backstay chain plates are bolted to the hull laminate.

01.03 Hull finish

00 General

Gelcoats are of weather-resistant type.

01 Topsides

Standard topside gelcoat colour is Ashland white 10093.

02 Boot top and water lines

Standard boot top and cove stripe gelcoat colour is dark blue RAL 5004.

04 Bottom

The hull bottom is treated with underwater epoxy primer.

01.04 Keel

00 General

The keel is of SG420/12 cast iron fin assembled to a 3% antimonial lead bulb. Keel bolts are of A4-70 stainless steel.

01.05 Steering system

00 General

There is a twin rudder steering system with double steering wheels. The steering head sprockets are connected to a central steering track through 5/8" chains and 6 mm wires. There are four Ø 140 mm sheaves for steering lines. End stops at outboard end of steering track.
A weed deflector is in front of each rudder.

01 Rudder

The rudders are of PVC-foam cored glass fibre reinforced polyester laminate with tapered hi-tensile stainless-steel stock.

02 Rudder bearings and quadrant

Each rudder is supported by two self-aligning bearings.
Aluminium tillers connected to central track with link bars.

03 Steering pedestals

There are two composite steering pedestals at aft end of cockpit seats.

04 Steering wheels

Two 1.05 m glass fibre white painted wheels.

05 Emergency steering

There is provision for emergency steering by a tiller. The tiller is stowed in the lazarette.

01.06 Mast step

00 General

The mast is stepped through deck onto a composite mast step. There are tie rods connected between mast collar and mast. The mast shoe is aluminium.

01.07 Through hull fittings

00 General

All the through-hull connections below waterline are seacocks in Polymer/Nylon composite (bronze in engine room), finished flush with outside and located in an accessible position. The inboard side of the seacocks are fitted with a stud long enough to take two hose clamps.

01.08 Transom

00 General

There is an open transom on the yacht. There are foldable steps on the transom down to the swimming platform.

01 Transom hatch

The transom opens to form a large swim platform. The transom door opening system is operated by a pair of hydraulic cylinders, operated by a switch located under starboard stern deck wing, easily accessible from the dinghy when entering the boat.

01.09 Hull windows

00 General

There are two hull windows on each side in saloon. Windows are made of 10 mm PMMA. Clear view opening 250 x 900 mm.

01.11 Focsle

00 General

There are two stainless steel bars in the forepeak for ropes and fender lines. One 60 cm long bar on port side and one 40 cm bar on the forepeak hatch.

01.12 Lazarette

00 General

There is one 40 cm long bar on the lazarette hatch for ropes and fender lines.

02 DECK

00 General

Scantlings, materials and workmanship throughout are consistent with the construction of a light deck without sacrificing strength or stiffness.

02.01 Laminate

Deck is of sandwich construction, using multiaxial glass fibre reinforced vinylester laminate and a low-density closed cell foam core. High-density core or solid laminate in way of deck fittings. Non-teaked surfaces have a gelcoat finish.

02.02 Deck finish

Standard coaming and coach roof gelcoat colour is Ashland white 10093.
Standard coaming stripe gelcoat colour is dark blue RAL 5004.

02.03 Teak woodwork

01 Teak on the deck

The teak deck consists of 36 x 9 mm teak battens with 4 mm black caulking. The side decks, coamings, bathing platform, cockpit sole and seats are teak covered. Teak deck is vacuum packed and bonded to the deck with epoxy.

02.04 Winches and windlasses

01 Drum winches

- Two Harken 60.2 STEA 24H electrical main sheet winches in cockpit
- Two Harken 60.2 STEA 24H electrical primary winches in cockpit

All halyards and control lines are led back to the winches in the cockpit.

03 Anchor windlass

A Lewmar V4, 24 V windlass with gypsy only for use with galvanized 10 mm Grade 40 chain. The windlass has an Aisi 316 stainless steel base. One wired remote control in the bow locker.

02.05 Bow fitting and anchoring

00 General

The stainless-steel bowsprit/anchor arm has integrated Delrin anchor rollers with GRP cover.

02.06 Sail handling systems

01 Tracks

- Two aluminium genoa sheet tracks
- Two genoa cars with adjustable pin stops
- Two end stops with fairleads aft
- Two end stops forward

02 Blocks

- One standup block for main sheet at deck
- One double block aft end of boom for main sheet
- Two blocks forward end of boom for main sheet
- Ten halyard blocks, recessed at mast
- Two blocks, recessed at mast for main sheet
- Two blocks for gennaker sheets, one each side on the bulwark
- Organizers mounted under deck for halyard leads to cockpit

03 Jammers and clutches

- Spinlock clutches in cockpit

02.07 Deck fittings

01 Pulpit and pushpit

Pulpit and pushpit are of Ø 30 mm stainless steel tubes. Pulpit is 610 mm high with one intermediate rail. The pushpit consist of a central pushpit and two side pushpits. The upper rail is at 900 mm above cockpit level.

03 Cleats and fairleads

There are six fixed mooring cleats: one pair forward, midship and aft. Fairlead for cross mooring integrated in pushpit feet.

04 Lifelines and stanchions

The spacing of lifelines and stanchions are conforming to OSR requirements. 5 mm stainless steel wire lifelines with polished turnbuckles and eyes. Lifelines are lead through 610 mm high stainless-steel stanchions. There are detachable lifelines at stern for easy access to the bathing platform.

99 Other

- One socket for flagpole on pushpit
- Three Wichard 6604 folding pad eyes for jackstay attachment in the cockpit
- One Harken 627 pad eye for gennaker tack line attachment on the bowsprit
- One Harken 648 pad eye for A0 tack line attachment on bow
- One Harken 627 pad eye for inner forestay attachment
- Two Wichard 6605 folding pad eyes for boom preventer lines forward of the main shrouds
- Two Wichard 6606 folding pad eyes for jib outhaul
- Two Wichard 6605 folding pad eyes for gennaker sheet
- One pair of swim ladder fittings on transom platform

02.08 GRP mouldings and vents

- Sprayhood recess
- Two storage lockers in cockpit benches

02.09 Hatches and windows

01 Deck hatches

- Two Lewmar flush 2G Size 20, one above each aft cabin
- Two Lewmar flush 2G Size 60 above saloon
- One Lewmar flush 2G Size 20 above Owner's cabin toilet
- One Lewmar flush 2G Size 20 above Owner's cabin corridor
- One Lewmar flush 2G Size 60 above Owner's cabin

02 Teak covered hatches

- Splitted wedge shaped hinged hatches to forepeak locker/windlass space
- One hinged hatch to lazarette

03 Portholes

- Two Solimar 064P450 port lights, one in port aft head and one in galley
- One Solimar 06413-07 port light in each aft cabins to cockpit

04 Deck house windows

Light grey tinted acrylic deck house windows, two on each side. Windows are bonded to the superstructure.

05 Main companionway

There is a lockable companionway with a manually forward sliding hatch and a drop board of tinted acrylic.

02.10 Cockpit

01 Cockpit seat

Cockpit seats with back rest. Storage lockers are accessible through hatches in cockpit seats.

03 Cockpit table

Two removable varnished teak cockpit table with folding leaves.

02.11 Canvas work

01 Spray hood

There is a large spray hood over the main companionway. When not in use the sprayhood is folded away in a deck recess. Sprayhood recess has a GRP protection cover.

03 INTERIOR

00 General

The interior is built according to contract layout drawings. European oak wood is used for visible interior with elements of painted and upholstered surfaces. All joinery work is done in accordance with the best yacht practices using first grade materials.

- Cabinets, tables, bureaus, seats, dressers have rounded corners
- Doors, partitions and panelling are oak-faced plywood
- Hanging lockers are equipped with rods
- Drawers are secured with latches
- Loose furniture can be secured to floorboards or bulkheads in order to be stored at sea

01 Finish

The wooden interior is varnished using two component urethane varnishes. The surface has a semi-matt satin finish.
Painted surfaces are in RAL 9010 warm white colour two component paint with semi-matt finish.

02 Overhead panels

Vinyl covered removable overhead panels are installed in all accommodation areas.

03 Floorboards

The top face is European oak with thin light stripes. The floorboards are varnished with several coats of urethane varnish and have satin finish. Two suction lifters are provided.

04 Topsides

Topsides where visible are lined vinyl covered.

05 Cabin door hardware

Hardware and outfit components are of a type designed to eliminate rattling or hanging. The cabin doors are provided with locks and catches to hold them in open position where possible.

06 Locker door hardware

All locker doors are fitted with high quality furnishing hinges and are kept closed with push button latches. A doorstopper is fitted where needed.

07 Mirrors

All bathroom mirrors are glass.

08 Blinds and screens

Mosquito screens and blinds for all deck hatches. There is a separate loose mosquito screen for the companionway.

09 Handrails

Handrails are mounted at the companionway and two in the saloon overhead.

10 Wardrobes and cupboards

The wardrobes include hanging rails and shelves. Hanging lockers are equipped with lights.
The cupboards consist of drawers and door covered stowage volume with shelves.

03.01 Bulkheads

01 Structural bulkheads

For construction see 01.02.02. The structural bulkheads are covered with plywood skin panels.

02 Partitions

Partitions are made of plywood construction with either oak veneered wood, painted or padded surfaces.

03.02 Forward Cabin (Owner's cabin)

00 General

The forward cabin has a double bed on centerline, a hanging locker and writing desk on starboard side, shelf cabinet on port side and upper lockers to both outboard sides. Bulkheads are covered with veneered panels. Hull sides exposed outboard are covered with white vinyl panels.

01 Beds

Foam mattress, 15 cm over Scandi-Flex battens. The bed is fitted with three plywood leeboards. There are two drawers below the bed.

06 Lights and switches

Two reading lights are installed at the head end of the bed. Recessed lights are installed in the ceiling panels.

03.05 Aft cabins, Port and Starboard side (Guest cabins)

00 General

The aft cabin to port side has a double bed with outboard shelf. The aft cabin to starboard side has twin beds with outboard shelf. A hanging locker is placed forward of the outboard bed. Bulkheads are covered with veneered panels. Hull sides outboard are covered with white vinyl panels.

01 Beds

The beds have foam mattresses 15 cm and plywood bottoms. The double bed is fitted with a plywood leeboard and the twin beds are fitted with canvas lee cloth. There is storage inside the beds.

06 Lights and switches

Two reading lights are installed at the head end of the beds. Recessed lights are installed in the ceiling panels.

03.06 Saloon

00 General

The saloon features a dining area on port side and a navigation area on starboard side. The saloon, navigation and galley area has an open layout arrangement. Bulkheads are covered with veneered panels. Hull sides outboard are covered with white vinyl panels. There are two hull windows on each side in the saloon.

01 Chairs

Two foldable chairs with armrests at the dining table. The chairs can be secured onto floorboards while sailing.

02 Lockers

Place for entertainment electronics located outboards in the navigation area.

03 Sofas

The dining sofa is U-shaped on port side. The navigation seat is on starboard side. There is stowage under sofa and seats.

04 Tables

The dining table size is 850 x 1150 mm.

05 Upholstery and fabrics

Sofa and seat fabrics are to be chosen from Nautor standard selection.

06 Lights and switches

Recessed indirect lighting in the ceiling panels, above saloon table and at the chart table.

03.08 Galley

00 General

The galley is located on port side aft of the saloon.

01 Finish

The lockers are in wood. Work tops in white Corian, edges with rounded corners for easy cleaning.

02 Sink and faucets

Two stainless steel sinks of different size with one kitchen faucet.

03 Lockers and drawers

Drawers, garbage bin and stowage space for pots and pans in lower lockers. Upper lockers with stowage space for crockery, glasses and dry food.

06 Lights and switches

Recessed lights (one light can also be used as a leading light) in the ceiling panels.

08 Domestic appliances

- One 130 L refrigerator
- One 42 L drawer fridge
- 3-burner LPG stove with oven
- Cooker hood

03.10 Navigation area

00 General

The navigation area is located in the saloon on starboard side.

01 Chart table

The chart table is made of oak, shallow storage space under the tabletop.

03.11 Bathrooms general

00 General

There are two head compartments. The Owner's cabin bathroom and the starboard guest cabin bathroom. Both of them have a separate shower stall.

01 Finish

The bathrooms are built in first grade materials using wood, GRP and Corian. The lockers are in wood, and the vanity tops are made in Corian. The shower stalls are made in GRP. The floorboards in the bathrooms are the same type as in the cabins. The floorboards in the showers are of water-resistant material.

02 Wash basin

Both bathrooms have an under mounted Corian washbasin.

03 Faucets

Faucets and fittings are from Nautor's standard selection. One faucet at the washbasin and one faucet with wall mounted hand shower in the shower stall. The finish of faucets and fittings is polished chrome.

04 Shower doors

Shower doors open inwards into shower stalls. There is a step to keep water on the drained side.
Shower stall doors are of tempered 8 mm clear glass and fitted with polished stainless-steel fittings.

05 Mirrors

The mirrors are installed on upper cupboard doors.

06 Lights and switches

General lighting is created with down light LED-spotlights.

07 Accessories

Accessories in line with faucets as follows:

- Two towel hooks in forward bathroom
- Four towel hooks in aft bathroom
- One towel bar in forward bathroom
- One soap dispenser in each bathroom
- One toilet roll holder in each bathroom
- One concealed waste bin in each bathroom

03.16 Engine room

00 General

The engine room is located under the companionway. There is a removable front part of engine box and service hatches on each side.

04 ENGINE AND HYDRAULICS

00 General

Engine space is internally sound insulated.

04.01 Main engine

00 Engine

The engine is a 4-cylinder marine diesel engine, Yanmar 4JH80 58.8 kW 80 Hp. The engine is soft mounted. Sail drive leg, Yanmar.

04.02 Propulsion system

01 Propeller

Three bladed, 20 x 15 LHS folding propeller.

04.03 Cooling system

00 General

There is a thermostat controlled freshwater cooling system with a heat exchanger. Sea water discharge is through exhaust system.

04.04 Fuel system

00 General

The feed line to the engine is equipped with fuel filter/water separator.
There is a single 10 µ cartridge filter for the main engine. All flexible hoses are according to ISO 7840.

01 Tanks

The fuel capacity is 650 L (172 US gal), in two polyethylene tanks with gauges. One filler line from deck for each tank. Tanks are vented through hull, fittings just below the shear line. Fuel feeder and return lines have shut-off valves on each tank.

04.05 Exhaust system

00 General

The wet exhaust system has a marine silencer with water-lock for the main engine. Cooling water and exhaust gases from the main engine exit under the transom.

04.08 Engine controls

00 General

Cockpit starboard coaming:

- Engine control ON/OFF
- Start and stop buttons
- Single lever control of throttle and gear shift
- Control light for starting battery charging
- Coolant temperature alarm
- Oil pressure alarm
- Tachometer with hour counter

04.09 Thruster

00 General

The bow thruster is a Sleipner ERV130-250T 24V, swing type or equivalent. The thruster is electrically powered by handling batteries. The thruster is controlled by a joystick unit located on starboard pedestal.

04.10 Firefighting system

A fire extinguisher port mounted outside engine room bulkhead. In the event of a fire, the small port can be opened to allow a hand-held fire extinguisher to be used to access the engine space.

04.20 Hydraulics

01 Hydraulic functions

Manual hydraulic functions for the rig:

- Backstay tensioner
- Boom vang
- Mainsail outhaul

05 PLUMBING

00 General

Components and valves are labelled.

Seawater hoses are of marine seawater resistant rubber, freshwater pipework mainly of nylon tubing and freshwater hose. Water tanks of Polyethylene provided with inspection lids and vent pipes.

05.01 Fresh water system

00 General

A pressurised hot and cold-water system is provided with distribution to all heads and to the galley, plumbing made of push-fit type plastic pipes.
There is a filler hose from side deck for each water tank.

Faucets: Single lever mixers at wash basins and galley sink, single lever shower mixers with hand showers.

01 Water tanks

The water capacity is 500 L (132 US gal), in two Polyethylene tanks with gauges.

02 Pressure pump

Water pressure system equipped with one 24V DC pump.

03 Hot water system

For hot water usage an electrical water heater with engine cooling coil is installed. Tank volume is 40 L (10.5 US gal). In-built heating element is working on AC power.

04 Deck shower

There is a deck shower installed on bathing platform. Hot and cold water plumbed to a mixer with hand shower.

05.02 Sea water system

00 General

Seacocks in glass reinforced nylon composite for all standard through-hull connections below waterline located in accessible positions. The seacocks have stud long enough to take two hose clamps.

05.03 Grey water system

00 General

Galley sink is drained directly to a seacock. Grey water from wash basins and shower trays is collected to drainage pump boxes, then discharged overboard by the in-built automatic pumps.

05.04 Black water system

00 General

Both toilets are connected to a black water Polyethylene holding tank.

01 Tank

One black water holding tank for forward toilet and one black water holding tank for aft toilet, capacity 50 L each with indication. The tanks are fitted with inspection lids and vent line.

02 Tank discharge system

The tanks discharge to seacocks. Deck suction lines are also provided.

03 Toilet systems

There are electrical freshwater flushed marine toilets in aft and forward heads.

05.05 Drainage system

00 General

Deck drains are connected mainly to outlets above waterline.

01 Bilge pump systems

The bilge divided in three sections, i.e. fore peak, amidships (main) and lazarette.

- Fore peak DC driven submersible pump (2 pcs)
- Main bilge DC driven submersible pump (2 pcs)
- Lazarette DC driven submersible pump

There is a manual bilge pump in cockpit for main bilge.

Special attention is paid to ensure that all the bilge pump pick-ups are mounted in easily accessible positions to allow debris to be cleared. All outlets are mounted above the waterline.

03 Deck drains

All deck drains, that cannot be direct overboard, are connected to integrated through hull fittings on each side.

05.06 LPG system

A manual leak detector and a remote magnetic shut-off valve are placed inside the gas bottle locker. There is also a manual shut-off valve next to the stove in the galley.

In the fore peak locker there is space for one 2.75 kg camping gas bottle. LPG is used for the gas cooker in galley, see section 03.08.08.

The gas installations are according to ISO 10239.

05.07 Ventilation

01 Natural ventilation

Openable deck hatches and port holes for natural ventilation of saloon and the cabins.

02 Forced ventilation

Fresh air is led into each cabin and head through openings in deck via a water trap. Extraction via a fan located in the lazarette.

03 Galley fan system

Cooker hood ducted to an extractor fan located in lazarette.

04 Engine room ventilation

Air inlet and outlet through aft deck superstructure, extraction with a thermostat-controlled fan.

05 Battery box ventilation

The battery boxes are ventilated with a fan located in the lazarette, air is led to the deck via a water trap.

05.09 Refrigeration system

00 General

Battery driven 24V refrigerators with thermostat controls are installed the galley.

05.10 Galley equipment

See section 03.08.08.

06 ELECTRICAL

00 General

The electrical components are chosen based on the Yards long experience in the yachting industry. Electrical diagrams are delivered with the yacht, for both DC and AC. Cables are labelled with identification numbers at both ends.

At watertight bulkheads wires are run up to deck head height when penetrating the bulkhead or are sealed in place to produce water tightness.

24V DC system with insulated return. 230V AC is a three-wire grounded system. Wires are sized to minimise voltage drop.

06.01 AC-system

00 General

The AC system is a 230V 50Hz single-phase three-wire AC-system.
The AC system can be fed by 230V 32A shore power inlet.

Shore inlet provided with circuit breaker, earth fault protection, polarity alarm and land connecting cable. The inlet supplies power to battery charger, water heater and the 230V outlets.

01 Shore power

Shore inlet plug, 230V is installed inboard on coaming. Shore power cable is 15 m long.

03 Chargers

One combined charger and inverter 24V 70A charger with 3-step charge characteristics for service battery. There is temperature sensing at the battery. Inverter capacity is 3000VA.

The service batteries are charged by a 24V 110A alternator with three step regulation on the main engine, or by a 70A combi charger working on AC. For the starter battery there is a 12V 115A engine alternator or a 12V 5A charger working on AC.

07 Outlets AC

- 230V outlets of schuko type
- One double outlet in saloon, at chart table and in cabins
- Single outlets in the heads
- One double outlet in the galley

06.02 Earthing system

00 General

The AC system is using the keel as underwater earthing point.

01 Lightning protection system

Mast and shrouds are electrically connected to keel.

06.04 DC-system

00 General

2-pole 24V insulated return DC-system for lighting, blowers and pumps. Wires are sized to minimise voltage drop.

01 Service batteries

The service battery bank is 24V 340Ah / 20 h rating. The batteries are of maintenance-free AGM type.

The bank is for the lights, blowers, pumps and electronics. The battery bank is located in a ventilated GRP box.

02 Alternator

One 24V 110A alternator with 3-step charge characteristics on the main engine for service battery bank.

06.05 Plumbing and monitoring system

00 General

Levels and alarms are presented on a 7” display at main switchboard in saloon.

04 Black water system

Black water tanks are equipped with level indicating sensors and full tank alarm at main switchboard.

05 Drainage system

The electrical bilge pumps can be operated in manual or automatic mode. The automatic mode is controlled by a level switch next to the pump.

06 LPG system

The gas supply to the gas stove is operated by a switch near by the stove, which controls a solenoid valve at the gas bottle.

08 Water metering

Water tank levels are shown on main switchboard display.

09 Fuel metering

The fuel tanks levels are shown on the main switchboard display.

10 Monitoring system

In the saloon on the main switchboard display following functions are indicated:

- Water in fuel alarm
- Exhaust temp alarm
- Thruster down alarm

Level metering:

- Water tanks
- Fuel tanks

11 Fire alarm

There are battery powered smoke detectors in all living areas. There is a smoke detector in the engine room which gives alarm at the main control panel.

06.06 Engine DC

01 Starting batteries

There is a 12V battery for the main engine with a capacity of 50Ah / 20h

The battery is of maintenance free AGM type.

03 Alternator

One 12V 115A alternator on main engine for engine starter battery.

06.08 Ventilation and heaters

02 Galley fan system

Galley fan is controlled with an on/off switch in the galley.

03 Engine room

Thermostat controlled fan.

04 Battery boxes

Ventilated to open air.

06.09 Electrical panels

01 AC and DC panels

The AC and DC main systems can be controlled and monitored at the electrical panel in the saloon. The panel is referred to as “main switchboard” and is located on starboard side in the saloon.

- Switches of trip-free circuit type
- AC system displaying V and A
- DC system displaying V, A and Ah for service battery
- Switches for interior and navigation lights

- In separate locker:

  - Main switch and fuses for engine DC
  - Earth fault test panel

- Service main battery switch box

- Main switch and fuses for AC

03 Cockpit panels

- Engine control, see 04.08

06.10 Domestic appliances

00 General

Selected appliances are of high class and well-known brands.

09 Refrigerator

There is a battery driven fridge of 130 L and a drawer fridge 42 L located in the galley. See section 03.08.08.

12 Stove

There is a stainless steel 3-burner gas stove with oven, gimbaled and provided with fiddles. There is flame failure protection on burners. Manual gas shut-off cock adjacent to stove. Remote controlled shut-off and leak detector near gas bottle with control switch. The gas installation is according to ISO 10239.

06.11 Lights

00 General

Every cabin has switches for lighting in cabins and toilets.

02 Overhead lights

- LED lights inboard in all cabins and toilets
- LED lights or indirect lighting outboard in all cabins and toilets

03 Reading and table lights

- LED reading lights with switch at each berth
- LED light with arm at chart table

08 Navigation lights on deck

- Stern light LED
- Port side light LED
- Starboard side light LED
- Navigation lights are switched from main switch board in saloon.

09 Navigation lights on mast

- Steaming light on forward side of mast, controlled from cockpit panel
- Anchor light at top of mast, controlled from main switch board panel

10 Spreader lights

- Two spreader lights, facing down on 1st spreader, controlled from cockpit panel

11 Windex lights

- Windex light at top of mast, controlled from main switchboard

12 Boom lights

- One boom light controlled from electrical panel

99 Other

- Compass light, controlled from main switchboard
- LED light in engine room
- Red night light in overhead in galley, controlled from main switchboard in saloon

07 ELECTRONICS

00 General

Instruments are available in the optional list.

07.01 Compasses

01 Magnetic compass

There is one magnetic steering compass at each steering console. Compass adjustment and deviation card is not included.

07.02 Sailing instruments

00 General

There is a Brookes & Gatehouse Triton^2 SDW system with masthead unit and depth/speed/water temperature sensor.

02 Digital displays

Two B&G Triton^2 Graphic 4.1" displays, mounted on the pedestals.

04 Sensors

- One combined depth/paddle wheel speed sensor model DST810, located on starboard side in front of keel, housing in plastic
- Wind sensor B&G WS310 at mast head

07.04 Communication systems

01 VHF Radio

VHF radio B&G V60-B with built-in AIS transceiver Class B. Including NSPL-500 VHF antenna splitter and GPS-500 antenna.

07.06 Autopilot system

01 Main unit

There is a B&G Triton^2 Pilot Computer system with one Triton^2 Pilot Controller on the starboard steering console.

02 Power pack

There is a 24V rotary drive unit connected to the steering system.

07.07 Aerials

01 Navigation antennas

A B&G ZG100 GPS antenna is mounted on the port lower pushpit rail.

02 Communication antenna

The B&G V60 VHF is connected to the AC-Marine CX4 VHF antenna at masthead.

08 RIG

00 General

Spars are built of aluminium, white painted with measurement bands in black. There is a double spreader fractional rig with discontinuous shrouds and 22 degrees swept aluminium spreaders on a wide shroud base.

IG = 20.70 m
J = 6.10 m
P = 19.90 m
E = 6.70 m

08.01 Mast

Oval aluminium section. Preparations for full-battened mainsail (battcars to be supplied by sailmaker), all halyard exits smoothed for rope halyards equipped with stainless steel chef guards.

- Single spin box and lead with 2:1 provision
- Double genoa box
- Stainless steel nose tang for FS
- Stainless cap for shroud terminal
- Diagonal terminate in spreader root
- Stainless steel boom a vang gooseneck
- Aluminium aerofoil spreaders

Internal wiring secured to mast. Neoprene mast boot with Dacron cover over deck partners.

08.02 Boom

White painted aluminium section, for a loose footed mainsail. Boom includes:

- Sheaves at outboard end for two single line reefs led to deck winches
- Sheave for outhaul
- Provisions and blocks for the German mainsheet system

- Preparation for three leg lazy jack system
- Attachment for preventer system

08.03 Standing rigging

Nitronic 50 rod rigging. Trough deck manual furler for the jib, control line led under deck to cockpit.

08.04 Running rigging

Ropes of Dyneema with Polyester cover. Main halyard with screw shackle, headsail halyards and sheets with snap shackles. Internal halyards.

08.06 Rig hydraulics

Anodized cylinders powered by 4-function manual pump control panel in cockpit, to include:

- Boomvang
- Outhaul cylinder
- Two backstay cylinders

09 EQUIPMENT

00 General

An iPad with the Owner's Manual app in English is provided included boat specific drawings and component manuals in Pdf format.

09.02 Anchoring and mooring

- One 30 kg stainless steel anchor with swivel
- 80 m of 10 mm Grade 40 galvanized anchor chain attached to anchor chain box with a short 16 mm plaited nylon line
- 10 m 16 mm plaited nylon anchor line spliced to a devil's claw for unloading windlass to mooring cleat when anchoring
- One boat hook
- Six Fenders F-3, 215 x 745 mm
- Four 20 mm, 15 m plaited nylon mooring lines

09.03 Sailing gear

01 Sails

To be provided by Customer. Builder and Spar manufacturer to provide sail maker with measurements needed, to notify sail maker of mast stepping schedule and to assist sail maker with installation and testing of sails.

03 Winch handles

Two 10" single grip winch handles.

09.04 Firefighting equipment

- Five portable fire extinguishers; one in deck locker and four inside
- Fire blanket in galley

Please note: There is no provision for gasoline storage in lazarette or anywhere else inside the boat.

09.05 Safety equipment

- Safety lines for deck
- Safety belts for galley and navigation station

09.06 Spare parts

- Basic spare parts kit for engine
- Basic plumbing spares
- Basic electric spares

09.99 Other

- Two suction lifters for floorboards
- Sounding rods for fuel and water tanks
- Flagpole 150 cm
- One deployable re-boarding rope ladder attached to transom lifeline