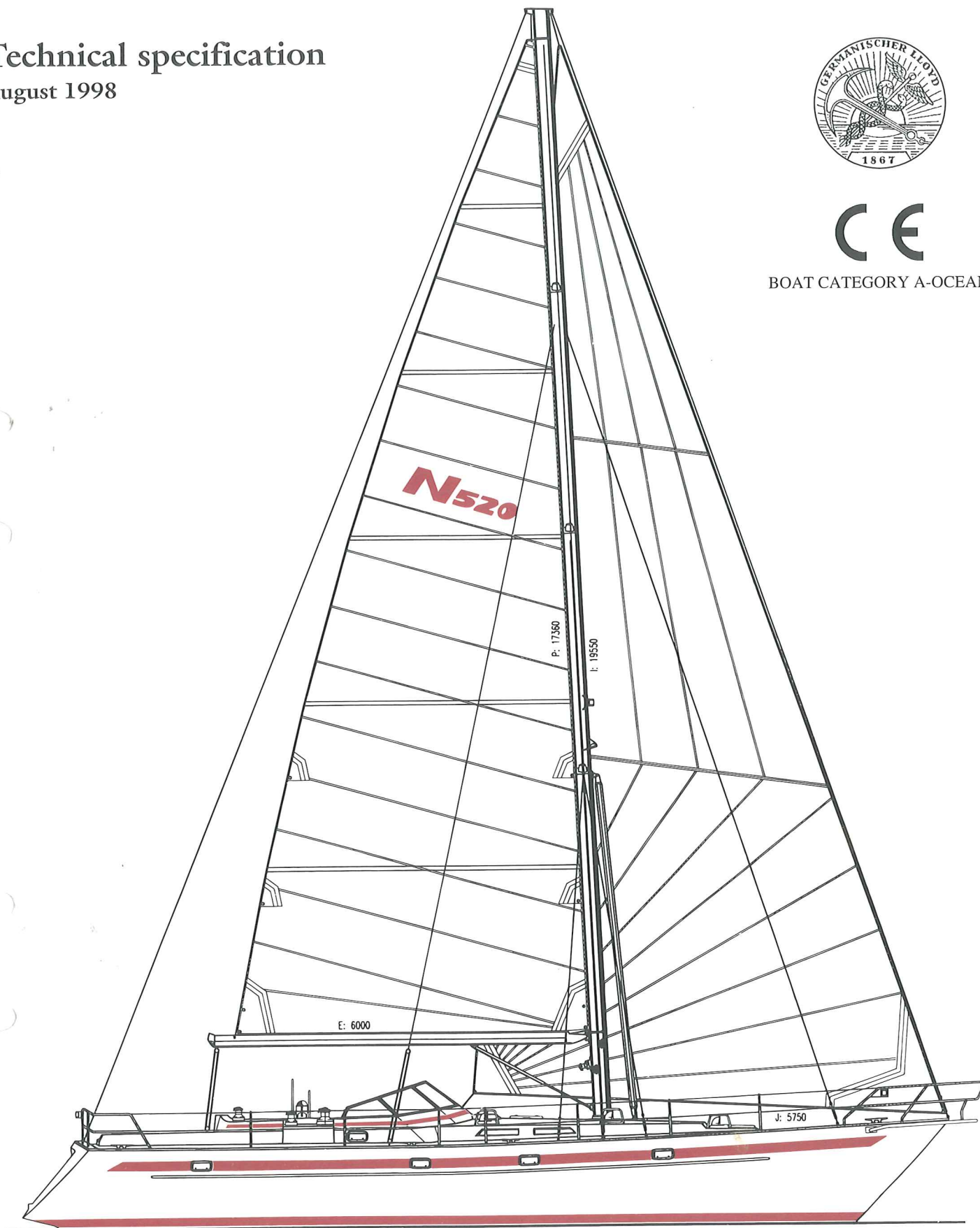


Technical specification

August 1998

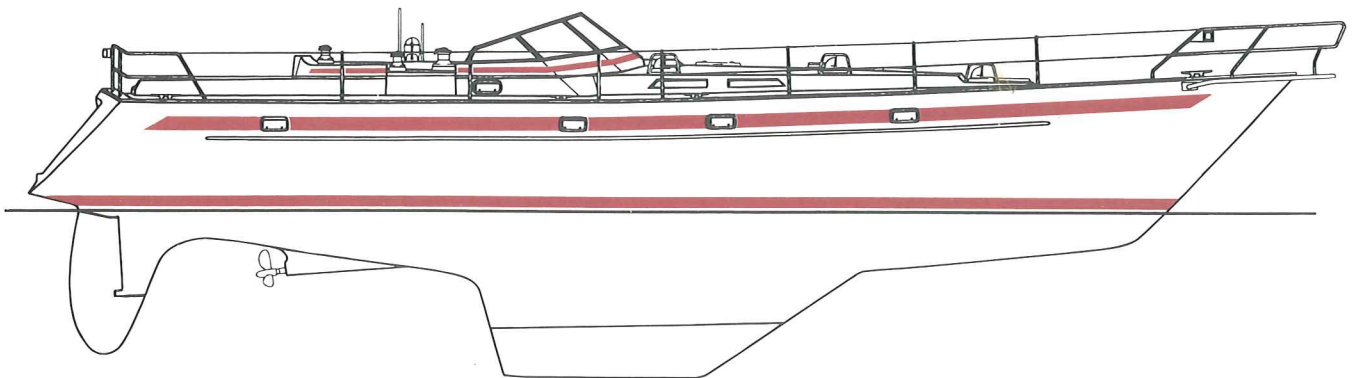
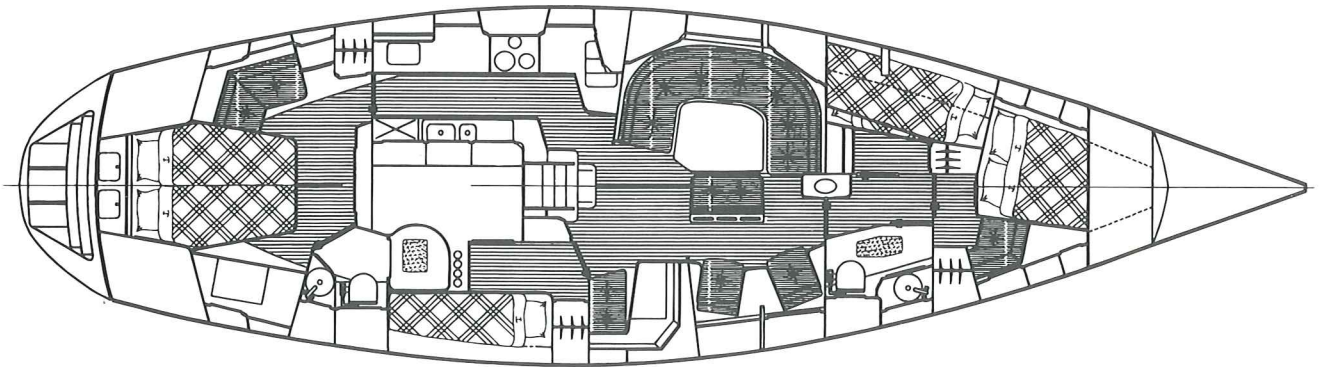
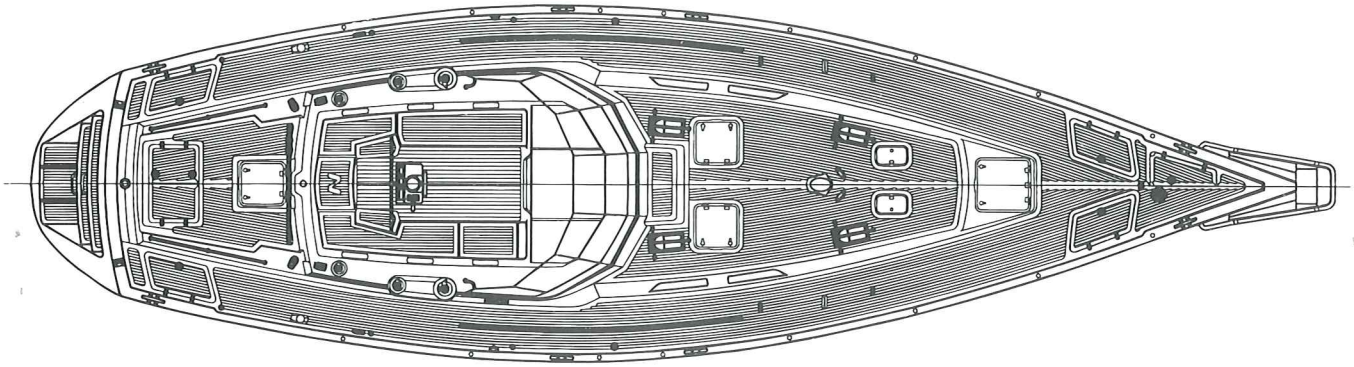


BOAT CATEGORY A-OCEAN



NAJAD
520

NAJAD
520



Specification

Design: Carl Beyer

Dimensions and data

Length hull	51'10"	(15.80 m)
Length incl. bowsprit	54'2"	(16.50 m)
Length waterline	44'6"	(13.55 m)
Beam	15'1"	(4.60 m)
Draught	7'3"	(2.20 m)
Displacement	20 000 kg	(20.0 t)
Lead keel	6 800 kg	(6.8 t)
Mast height above water line	70'4"	(21.45 m)
Total height for transportation	14'5"	(4.40 m)

Gelcoat

Hull	Neste GE 1000 LSE
Deck	Neste GE 1205 LSE
trim and water lines	Jotun GE 2001

Engine

Yanmar 4LH-HTE
Propeller shaft output 135 h.p., 99,2 kW
Flexible shaft connection

Volume of tanks

Fuel tanks in stainless steel.		
Water and holding tanks in acid resistant stainless steel.		
Fuel capacity	152 gal.	690 l
Water capacity	220 gal.	1 000 l
Holding capacity	1 x 13 gal.	1 x 60 l
	1 x 22 gal.	1 x 100 l

Sail areas

Cruising	1195 sq.ft.	(111,0 m ²)
Main	614 sq.ft.	(57,0 m ²)
Working jib 110%	581 sq.ft.	(54,0 m ²)

* Furling Genoa 140%	807 sq.ft.	(75,0 m ²)
* Stay sail	377 sq.ft.	(35,0 m ²)
* Spinnaker	2 045 sq.ft.	(190,0 m ²)
* Cruising chute	1 722 sq.ft.	(160,0 m ²)

* = Extra equipment

Mast and rig

Masthead rigged with three pairs of spread-twin lower shrouds and baby stay.
Seldén mast in silver anodised aluminium profile 274/185 mm, length 71'1" (21.60 m) stepped on the keel.
Headsail Furling system by Seldén, Furlex 12D and hydraulic backstay adjuster.
Removable inner forestay (cutter stay) with adjuster
Running backstay with tackle and stopper.
19-ply stainless steel wire standing rigging.
12 mm forestay, cap shrouds and lower shrouds. 10 mm double backstay, inner forestay and intermediate shrouds.
8 mm baby stay and running backstay.
Seldén rodkick with gas damper.
Stainless steel rigging screws. 7/8" for top shrouds. 3/4" for lower shrouds 5/8" for intermediate shrouds and baby stay.
Rigging screw protection in aluminium.
Stainless steel chain plates, bolted to transverse bulkheads, bonded to the hull sides.

The mast is fitted with deck light, steaming light, internationally approved signal horn, and prepared for spinnaker equipment, two self-tailing stainless steel halyard winches Andersen 46 ST, winch handle pocket on the mast, stainless steel reefing winch Andersen 12 ST, Windex and flag halyards. Rope to wire main, jib and inner forestay halyards. Topping lift in terylene.
Ample cleats.

Seldén boom in silver anodised aluminium profile 200/117 mm with internal outhaul and double reefing lines with stoppers.
Main sheet to two winches on a ball bearing car and adjustable sheet point.

Sails

Full-batten mainsail with ball bearing sliders and Furling headsail in 450 g/m² Dacron cloth. The main sail is fitted with bolt rope along foot.

The sails are delivered complete with sail number, battens, telltales, two reefs in the main and sail bags. Main sail cover.

Deck fittings

2 x stainless steel, self-tailing Andersen 68 ST Genoa sheet winches.

2 x stainless steel self-tailing main sheet winches, Andersen 46 ST.

3 x lockable winch handles, 25 cm.

4 x 40 cm mooring cleats, through bolted.

4 x 30 cm spring cleats, midships, through bolted.

Bowsprit with integrated anchor roller for a 35 kg CQR-anchor.

Pulpit and pushpit in acid resistant steel.

Double lifelines with seven pairs of stanchions screwed to fittings, which are through bolted to the rail below the capping.

Gateways in lifelines on both sides.

Folding bathing and safety ladder fitted in the integral swimming platform.

Main sheet track, with trim lines and stoppers.

4 m long genoa tracks and 2 x variably adjustable sheet blocks.

Windscreen of toughened glass in aluminium frame prepared for optional stainless steel grab rails.

6 x deck hatches, Lewmar Ocean, on deck. One of size 70, three of size 60 and two of size 20.

12 x stainless steel portholes in the hull sides.

4 x dorade deck ventilators with stainless steel protection bars.

Deck fillers for water and fuel and for evacuation of the holding tank.

International approved navigation lights.

Illuminated compass.

Sprayhood from the top of the windscreen and a sprayhood extension.

Shower at the swimming platform.

Electric windlass on deck, 24 volt/1500 W. 35 kg CQR-anchor and 60 m, 10 mm chain.

23 kg folding anchor, 3 m chain and 40 m 16 mm warp.

6 x 10 m 18 mm mooring lines.

6 x 9" x 35" fenders with lines.

Ensign staff and boat hook.

Deck and superstructure

Deck and coachroof are built in sandwich construction with multiaxial glass fibre reinforced polyester with balsa as spacing material for strength and insulation.

The colour is Ivory white with carmine red trim line.

Hull and deck are bolted together.

Strengthened glass fibre laminate beneath stressed areas.

Substantial teak capping.

The deck, coachroof, and swimming platform are laid with solid caulked teak, screwed with acid resistant stainless steel screws, laid in silicon to the GRP deck.

Five large self-draining lockers for anchor, chain, warps, fenders and gaz bottles and one large water-proof lazarette in the aft deck.

Six 32 mm internal deck drains to avoid smears to topsides.

Cockpit

Spacious cockpit with large navigation table and sliding hatch in teak below fixed windscreen.

Integrated grab rails in the aft part of the navigation table.

Seats covered with seamed untreated teak.

Helmsman's seat behind the wheel with inlaid Najad logo.

Removable teak grating on the sole.

Steering pedestal with covered wheel, engine lever and stainless steel protection bar for the compass which also supports the cockpit table. Space for engine control panel and instruments.

Flush recesses in the coamings on both sides.

Behind the windscreen there is space for additional instrumentation.

Two 12 volt plugs and two chart lamps.

Cockpit locker under the starboard seat.

The sprayhood is splash-proof and fitted in a groove to the top edge of the windscreen.

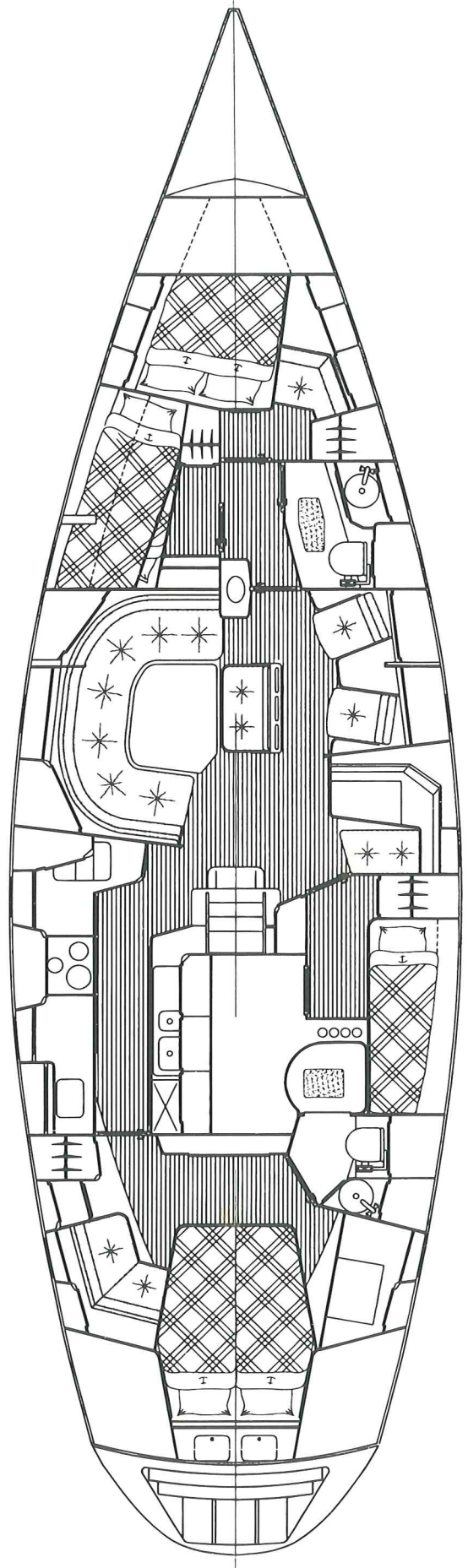
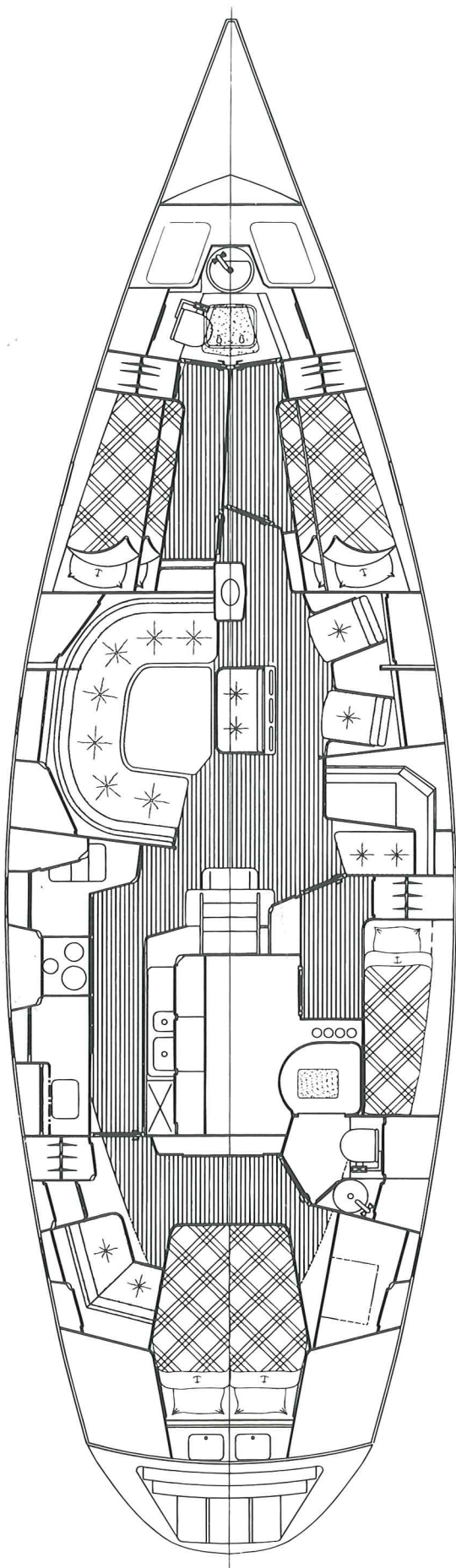
The sprayhood offers a completely protected area at the forward end of the cockpit and with the extension the entire cockpit is covered.

Manual bilge pump operated from the cockpit. Electrical bilge pump with both automatic and manual switch.

2 x 32 mm cockpit drains with drains from the seats.

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Interior

The interior is handcrafted in selected and unstained African mahogany, hand polished and varnished to a satin finish.

Cupboards and doors in solid mahogany with profile-milled frames.

Hull sides above berths are lined in mahogany.

Flooring of varnished teak and holly plywood.

Removable hatches for the bilge and tank gauges.

Headlining of white vinyl covered panels with mahogany strips.

Layout

The layout in the Najad 520 will be built standard in two versions according to drawings in the brochure and this specification. Each boat is built to order only and the interior and layout may be altered according to client's requirement, but the alterations have to be confirmed by yard.

The layout is planned from the experience gained in harbour and at sea. It has been tested during a long period of time both hard ocean racing and cruising.

Saloon

The spacious saloon is the central living area in the boat. A large curved sofa surrounds the saloon table. Bottle stowage in centre of table.

Two easy chairs on starboard side with a table surface and cupboard in between.

Plenty of shelves and cupboards.

Stowage under port side sofa.

Ample overhead lights and reading lights for settees and berths.

Grab rails on both sides of the companionway.

Fire extinguisher under the saloon table.

Galley

The galley is located on both sides of the gangway to the aft cabin and separated from the saloon by a bulkhead. The galley has full headroom and is located amidships.

Twin sinks.

Pressure system with accumulator tank for hot and cold fresh water.

Single lever mixing tap.

Manual pump for cold water as spare.

Gimballed twin burner gas cooker with oven.

Gaspipes with remote controlled shut-off valve between cooker and gas bottle.

Two gas bottles 2.75 kg. Camping-gaz in portside aft anchor locker.

Large work areas in easily cleaned and durable Corian®.

Two well insulated ice boxes, one with water-cooled refrigeration unit.

Cupboards for plates, cups and glasses.

Cupboard under cooker for pans, etc.

Waste basket under sink.

Drawers. Cutting board with crumb box.

Lights over work area.

Navigation area

The navigation area is located amidships to starboard.

Chart table with stowage for charts.

Drawers and a separate chart stowage under the deck.

Chart lamp.

Ample space for individual instrumentation and modern navigation equipment.

Folding switchboard for easy access, equipped with circuit breakers and prepared for additional circuits.

Aft cabin with separate toilet and shower

A companionway on the port side from the galley leads to the aft cabin.

Amidships a large, wide double berth.

At the head end two recessed portlights in the transom.

A sofa, cupboard and wardrobe to port side.

A large dressing table/writing table to starboard side.

The separate toilet compartment contains a WC, a wash hand basin and a separated shower cabin.

Berth bottoms are unvarnished and ventilated with holes to avoid dampness.

Five portholes and a deck hatch which also can be used as an emergency exit.

Forward cabin or cabins

Forward of the main bulkhead two cabins with over and under berths can be built.

The interior can also be built to a large cabin with a wide double berth. In both alternatives with a separate toilet incl. shower.

Textiles

Saloon sofa and easy chairs: 125 mm cushion with raised forward edge made up from 75 mm, 35 kg/m³ polyeter and topped with 50 mm, 26 kg/m³ foam.

Berths: 120 mm cushion made from 100 mm, 35 kg/m³ polyeter and topped with 20 mm fibre fill.

Upholstery: All cushions are covered with light hardy and strong furniture Manchester plush fabrics in blue colour.

Flame-proof BS 5852.

Ventilation

Opening skylights, dorado ventilators, ventilators in the companionway hatch and opening portlights in the cabin sides.

Numbers, size and location depends on the layout onboard. As standard are included:

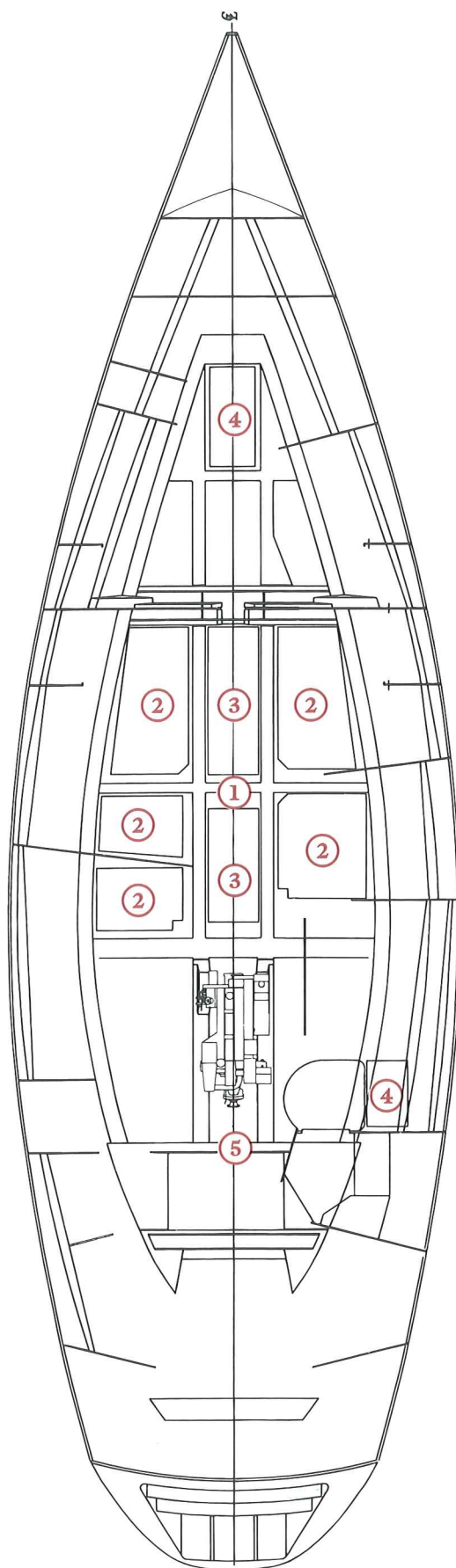
Six skylights.

Four dorado ventilators.

Two opening portlights in the cabin sides.

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Hull

The hull is built in a sandwich construction of multiaxial glass fibre reinforced ISO polyester. The surface layer is of NACA gelcoat for maximum protection against water penetration. A core of balsa for strength and insulation.

At the stern there is an integral swimming platform with a bathing and safety ladder.

① The bilge is reinforced with longitudinal and transverse floor plate construction. This supports keel fittings, mast, engine frame, tanks and cabin soles. Additional reinforcements longitudinal in the hull as stringers.

All main bulkheads are laminated and bolted on both sides to the hull. Transverse chain plate fittings laminated to the hull.

The rubbing strake is an integral part of the hull and is fitted with a brass capping.

The colour is white with carmine red trim line and water lines laid in the gelcoat.

Below the water line the hull is treated with epoxy primer and antifouling paint.

The hull is topcoated internally.

Keel

The entire keel is built by NACA profiles.

The lead keel is bolted on with 14 x 20 mm acid resistant stainless steel bolts.

A small wing at the bottom of the keel reduces the water flow beneath the keel which results in less drag.

Rudder and steering

Rudder and skeg in NACA profile.

Semi-balanced rudder in glass fibre reinforced polyester with 60 mm acid resistant stainless steel rudder post.

Rudder fitting in stainless steel, bolted to the skeg.

Steering pedestal in glass fibre reinforced polyester with leather covered stainless steel wheel of diameter 1200 mm, compass and top-fitted single lever control for the engine and engine board. Space for instrumentation in the pedestal.

Friction brake on wheel.

Stainless steel chain and wire cable to a quadrant.

Rudder post sealed with greased stuffing box.

A fitting for the autopilot can easily be installed to the top of the rudder post

Emergency steering on rudder post by tiller.

Tanks

② Fresh water tanks in acid resistant stainless steel installed between floor plate construction to port and starboard sides.

The tanks are fitted with inspection hatches.

③ Fuel tanks in stainless steel installed between floor plate construction amidships incl. level gauge.

Suction pipe with manual pump to the tank bottom for evacuation of dirt and condensation. A separate manual evacuation pump is delivered as spare.

④ Holding tanks in acid resistant stainless steel installed under the sole in the foreship and below the berth in starboard midship cabin.

Manual pump in the toilet compartment for drainage via through hull fitting.

Connected to deck fitting for evacuation ashore.

All hoses connected to the tank are gas tight.

Through hull fittings

All through hull fittings below the waterline are fitted with sea cocks.

The reinforced hoses have twin clips in acid resistant stainless steel.

Engine

⑤ Yanmar 4LH-HTE, 4-cylinder, 4-stroke turbo marine diesel with fresh water cooling.

Power output at prop. shaft is 99,2 kW (135 h.p. at 3 300 r.p.m.)

Mechanical reverse gear.

45 mm propeller shaft in acid resistant stainless steel.

Flexible shaft connection.

Stern gland with water lubricated rubber bearing.

3-bladed fixed propeller in bronze with shaft anode.

Single lever engine control at the pedestal.

Instrument panel installed in the pedestal containing:

- rev. counter
- temperature meter, oil pressure gauge and volt meter
- displays for
 - low oil pressure
 - high engine temperature
 - charging
- audible warning for oil pressure and engine temperature
- switch for instrument lights and alarm test
- key starter

Electrical starter motor, 2,5 kW (3.5 h.p.).

Electrical stop.

The engine is suspended in four rubber mounts for effective vibration damping.

Wet exhaust pipe with swan neck and effective rubber silencer.

Well sound insulated engine room.

The engine is easily accessible for servicing through a door in the starboard cabin.

Electrical system

24 volt, 280 amp.hr. domestic batteries with 12 volt converter for instrumentation.

24 volt a.c. 100 amp. alternator.

12 volt, 105 amp.hr. engine battery.

12 volt a.c. 80 amp. alternator.

Current regulator for battery charging.

Well dimensioned electrical cables.

The cables are to a large extent run in conduits.

Main switch panel with circuit breakers adjacent to navigation table.

Water and fuel meters, voltmeter.

Two main switches.

Additional installed equipment

- Electric bilge pump
- 3 x fire extinguishers (powder ABE)
- 2 x 2,75 kg gas bottles
- Autohelm ST50 Log, Echo sounder, Wind instrument and Multifunction instrument
- 2 x Eberspächer heating systems, D3L-C and D5L-C
- Shore supply 220 volt with earth fault detector, 5 x outlets onboard, immersion heater for hot water and 15 m cable.
- 220 V. Isolation transformer for shore supply.
- Battery charger 24 volt, 50 amp.
- Remote controlled shut-off valve for gas bottles.

Design

Designing a sailing yacht, capable of sailing all over the world and at the same time being comfortable and safe for the crew, requires a great experience of long-distance cruising yachts. The result is Najad 520. A 52 foot sailing yacht with a powerful, extremely seaworthy hull of modern design and with an IMS rating of 611.

Both the keel and the rudder are built up by NACA wing sections. The keel is relatively long in order to maintain course stability and a smooth action at sea. When handling on land the yacht can stand on the keel without support in the fore-and-aft line. The ballast keel of lead is bolted on and a small wing at the bottom of the keel reduces the water flow which results in less drag.

The rudder is semi-balanced with a strong skeg, which ensures the steering is light and positive. The strong floor plate construction and stringers are laminated into the hull in order to take the external and rig loads. All the tanks are placed inbetween the floor plate construction below the sole. A integral swimming platform is built into the stern for comfort and safety.

The Najad 520 offers, due to her size and volume, a variety of individual layout solutions. These layouts are designed by our design department and together with the client the boat is planned for 2-8 persons. Hereby, the Najad 520 is always a very personal yacht in a class of her own.

Built to order

The Najad 520 is built to order. Therefore, the layout and the equipment can be specified to each customer's requirement. Due to extra equipment the Najad Yard reserve the right to trim the boat with internal ballast. Layout or equipment that are non-standard have to be confirmed by the yard regarding price and delivery time. Owners will have access to the boat during the whole building period as far as possible, providing production is not disturbed.

Built according to Germanischer Lloyd's specifications

Each boat is designed and built to Germanischer Lloyd's specifications for "GL100 A5". This includes hull, deck, superstructure, main bulkheads, engine bed, chain plate attachments and stem fittings as well as Plumbing, Electricity and Electronics.



A Germanischer Lloyd's Certificate is supplied with each boat.

CE

Najad 520 is classified according to the CE rule "Boat Category A-Ocean", and to each boat is delivered documentation for this rule.

Engine installation certificate

Engine installation and other equipment in the engine room is approved by Yanmar regarding fuel and air inlets, temperature and ventilation.

Insurance

The yard's own insurance will cover the boat and other equipment supplied by the builder during the building time until delivery. Owner supplied items to be insured by the same.

Warranty

The hull has five (5) years warranty against faults in the laminate caused by water penetration (see warranty condition).

The boat has one year (12 months) warranty against production and material faults. Installed equipment has manufacturer's warranty according to their warranty conditions.

General

This specification is valid at the time of printing. Details of the construction, manufacture and equipment may be changed as a result of development from production and sailing the boats. The standard of quality and equipment will, however, be equal as specified herein. Drawings may in some cases show extra equipment.

Extra equipment

For additional equipment, please see separate list of accessories.

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