

# Specifications Steeler NG43 Offshore



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## 1. GENERAL

### **Dimensions**

Length overall	13,00 M
Length hull	11,71 M
Beam	4,48 M
Draft	1,12 M
Minimum clearance	2,75 M * with folding mast
Displacement (50% loaded)	12.1 ton

### **Type of yacht**

V shape hull.

### **Construction**

Aluminium EN AW 5083 hull, superstructure and construction.

### **Propulsion**

Cummins QSB 6,7 Marine diesel engine, In-line, 6 cylinder 4 stroke, Turbocharged aftercooled, 6,7 liters, 353 KW (480 HP) @ 3300 RPM.

### **Classification**

The yacht is build according to CE classification – B

### **Inspection**

The principal, the inspector of the CE and the suppliers have access to all the building areas during opening hours to control the quality of all the parts.

### **Alterations during the building process**

The shipyard has the obligation to build in accordance with the specification book and the drawings. Small changes which have no consequences for the price and delivery time are admitted, after consulting the architect and/or principal and provided that the quality remains.

Changes which have consequences for price, delivery time, weight or stability will only be executed after a written agreement between the principal and the shipyard.

### **Checking, commissioning and test run**

1. All integrated bottom tanks are being pressure tested according to CE regulations.
2. All systems like electrical installation, fuel, bilge, waste water, fresh water installation, heating, hydraulic (optional) etc. will be tested intensively in the water and on shore.
3. All exterior windows, doors and opening will be tested watertight according to CE regulations.
4. On expense of the shipyard, who is responsible for the technical installation, a test run of at least 8 hours will be held in open water to check all systems.  
The engines have to be tested at least 1 hours on full speed.
5. To achieve a horizontal and vertical trim with an unloaded ship, the shipyard is allowed to put in leaden breads till a maximum of 1000 kg, situated isolated, steady and seaworthy.

**Conditions/insurance/transfer of ownership**

During the building the general terms and conditions of the Hiswa apply, as mentioned at the District Court of law in Amsterdam on April 1<sup>th</sup> 2011 under number 040/2011.

**Suppliers**

All the rules of the suppliers will be followed exactly. If necessary the supplier will be asked to conduct inspections and when needed to install the equipment, so that the principal will be sure that the supplier has fulfilled his duty to guarantee.

**Manuals and drawings**

An instruction book with drawings will be delivered, according to the CE-standard with an index.

The electrical and system diagram-drawings will be delivered in a map with index, also according to the CE-standard.

## **2. HULL- and SUPERSTRUCTURE CONSTRUCTION**

### **Plate material**

Aluminium EN AW 5083 for the building of yachts.

### **Combined profiles and stiffening**

As plate material

### **Trade profiles**

Angle bar profiles and T-profiles are according to shipbuilding quality.

### **Quality and welding**

The welding is according to the highest standards of the Dutch shipbuilding.

Ship building requirements according ISO 12215/4 – Small craft – Hull construction and scantlings / part 4 : Workshop and manufacturing

Welding:

- MIG
- TIG
- All welders are Certified welders.

Plate thickness according to construction plans.

### **Specification of the materials**

Hull plating	: 5 mm
Decks (also above engine room)	: 5 mm
Bulwark inside	: 4 mm
Superstructure side's and front plating	: 4 mm
Wheelhouse and cabin roof plating	: 4 mm
Frame distance	: 400 mm

### **Longitudinal- and transverse reinforcement**

Longitudinal reinforcement are located at:

- keel construction
- tank partitions
- pass on in the engine foundation
- cabin sole in front of engine room partition to the chain locker partition.

Transverse reinforcement by ribs with knees, accumulated web ribs, tans on each rib.

The longitudinal- and transverse reinforcement are built in such a way that the water always runs to the lowest point.

### **Tanks**

Double bottom tanks are used for the fuel tanks, which are located in the engine room and front compartment. Tank walls and sling partitions each 4 mm. Tank tops in engine room extra stiffened and 4mm because off the various equipment strengthened with ribs.

All fuel tanks are accessible through inspection covers.

### **Waterproof partitions**

The Steeler NG43 Offshore is constructed with two watertight compartments.

The bulkheads are being made in a continuous weld and are reinforced.

The watertight bulkheads are strengthened by T-profile.

Feed through of bulkheads are made with glands.

Locations of watertight compartments:

1. In front of forward cabin
2. Engine room

### **Engine foundations**

The foundation of the main engine is strengthened in order to minimize vibrations.

The space in the foundation is filled with fine sand, this reduces the vibrations in the ship caused by the engine(s).

### **Bulwark**

Bulwark 6mm outside plate and 4 mm inside plate and interior provided with 8mm knees and 8 mm gunwale strip for the fitting of stainless steel sceptres of 1½" tube.

### **Water gutter pipes**

The anchor locker has aluminium drain pipes, the sliding roof recess in the pilot house has two aluminium drain pipes on port- and starboard side (optional). The deck water in the gangway and aft deck is collected in a water drain locker. This drain locker is positioned at the transition between aft deck and gangway and is drained overboard.

### **Stern**

In the double curved stern integrated steps will be welded on port and starboard.

### **Cockpit**

At rear of the cockpit there is an integrated seat in between the stairs (port and starboard) to the swimming platform.



### **3. PAINT SYSTEM**

- A 2-components AWL-Grip or AlexSeal painting system is applied:
  - Protective primer
  - Fairing compound
  - Finishing filler
  - Finish primer
  - Premium Topcoat
- Engine room in gloss topcoat.
- Different colour hull and superstructure
- The entire paint system will be applied accurate, professional and Dust-free according to high boat building standards.
- Each yacht is separately surveyed by an independent paint-job surveyor (Houkes Yacht coating consultancy)
- Various equipment will be anodised before painting.

### **4. CATHODIC PROTECTION**

The Steeler NG43 Offshore has anodes near the bow thruster, propeller shaft, propeller, rudder and at the bottom of the ship will be placed.

### **5. SOUND AND VIBRATION INSULATION**

Standard isolation hull and superstructure with foam core insulation. Soundproofing floor in saloon.

#### **In general**

To silence and absorb sound and vibrations as much as possible, all the engines, pumps, fans etc. will be set up flexible with hose connections connected to the pipes.

#### **Absorbing**

A sandwich construction consisting of sandwich plates, with a special layer of lead are mounted under the floors above the engine room.

#### **Insulation engine room**

Engine room insulated with Sonitech insulating panelling.

## **6. SAILING AND MANOUVERING**

### **6.1 Propulsion installation**

#### **Main engine**

Cummins QSB 6,7 Marine diesel engine, In-line, 6 cylinder 4 stroke, Turbocharged aftercooled, 6,7 liters, 353 KW (480 HP) by 3300 RPM. Optional different engines depending on customers wishes can be installed.

- Common Rail fuel system, water-cooled turbocharger, water in fuel alarm.
- Engine Oil cooler
- Internal cooling system with heat exchanger
- 24 Volt electric starting motor – isolated ground, 24 Volt & 75 Amp Alternator
- Available information via LCD display RPM gauge:
  - Engine speed, coolant temp, oil pressure, battery voltage, intake manifold temp, engine percentage load, boost press, oil temp, fuel rate, engine room press, barometric press, trip hours, throttle percentage, total fuel used, total engine hours, trip fuel used
- Audible alarm and alarm reset key
- Throttle.

#### **Gearbox**

- ZF gearbox, Type ZF85 A
- Flexible coupling
- Flanged to engine
- Gearbox supports for flexible mounting

#### **Propeller shaft**

Stainless steel duplex shaft

#### **Propeller shaft tube/socket**

Water lubricated propeller shaft installations will be installed.

#### **Propeller**

Bronze propeller, protected by keel-sole.

### **6.2 Steering installation**

Stainless steel 316 rudder, with NACA profile.

Stainless steel rudder shafts and levers.

A complete steering installation with steering pump and hydraulic cylinder is installed.

### **6.3 Bow thruster**

A SidePower 120 KGF electric bow thruster is installed.

### **6.4 Navigation**

The yacht is equipped with the following navigation instruments:

- Multifunctional display IS42, speed and depth

## **7. FUEL SYSTEM**

### **Fuel tank**

A fuel tank with a total capacity of approx. 1000 litres is installed.

### **Tank volume meter**

On each fuel tank a tank measuring system with a digital reading of the equipment is placed in the cockpit.

### **Fuel Filters**

A double fuel filter/ water separator is installed for means of redundancy. In addition the double filter is equipped with a water-in-fuel alarm.

## **8. BILGE SYSTEM**

### **Automatic bilge pumps**

Three 24V automatic bilge pumps with a capacity of approx. 65L/min are installed. The pumps are located in the engine room, amidships and in the foreship.

Pumps are automatically connected outside the 24V main switch. The drain tube of the pumps are connected with the ventilated overboard pipes.

A manual bilge pump is delivered.

## **9. FRESHWATER SYSTEM**

### **Freshwater tanks**

One Polyethylene freshwater tank with a total capacity of approx. 480 litres is installed in front of the ship under the cabin floor.

The tank is supplied with a filling pipe, hose and cap, which are situated in the gangway and a ½" ventilation pipe with gooseneck. On the water tank a tank measuring system is installed with a read-out in the wheelhouse.

### **Water Pressure System**

A Water pressure system, with an approximate capacity of 55 litres/min is installed.

### **Hot water System**

The Webasto, Isotemp boiler, type B50 completely stainless steel. The boiler is provided with a built-in tap water supply. Flue gases from the kettle run through the silencer, gooseneck and heat isolating skin grommet to the outside.

(optional KABOLA HR400 central heating system for heating and hot water supply).

## **10. WASTEWATER SYSTEM**

The yacht is equipped with a 200 litre Polyethylene wastewater tank. All wastewater from the toilets is collected in this tank. The tank can be emptied automatically with a pump, which pumps the water overboard. An additional possibility is to discharge the wastewater tank in a marina through a dockside discharge.

The drain of the kitchen through three-way tap, directly overboard or to the above mentioned tank.

All wastewater drains of the washing bowls, shower etc. are pumped directly overboard.

All blackwater pipes are odor proof.

### **Toilet installation**

One Planus toilet is installed, 24V, Multi, soft closing.

All-in-one panels are installed for flush operation.

## **11. HEATING**

### **Heating system**

Webasto heating system 5 kW of the type: Webasto Air Top Evo 55, 24Volts.

With exhaust outlets in every compartment throughout the interior.

## **12. VENTILATION SYSTEM**

### **Engine room ventilation**

Integrated ventilation grills portside and starboard in the superstructure.

### **Bathroom**

The bathrooms are equipped with forced ventilation.

### **Interior**

Entire interior is ventilated.

## **13. ELECTRICAL INSTALLATION**

The Electrical installation is executed according to the standards for the luxury yacht building. The electrical system has been designed to meet an estimated daily use and moderate charging times.

### **230 V AC System**

The 230 V AC system is a single phase.

### **230 Volt Switchboard**

A 230 volt switchboard is installed. Board fully equipped to switch over to shore power or 230 V inverter, automatic fuses for the 230 V system, measuring instruments for the voltage and ampere.

### **Shore Power**

The shore connection will be only run from charger to shore. Shore power will not be directed to any sockets or users directly. This to prevent corrosion. The shore connection will be placed in the cockpit.

The shore power exists off (Mastervolt):

Galvanic isolation transformer 3500W/16A

Shorepower connection 16A, with stainless steel cover

Shorepower connection cable, 16A – 15 m.

### **Cords and Cables**

All cord and cables are made of copper with a PVC insulation and connections by means of tinned lugs.

### **Inverter/Battery Charger**

A Mastervolt Mass Combi Pro 24/3500-100A is installed. Input 24 VDC, output 230 VAC.

### **24 VDC System**

The 24VDC system is free of grounding.

### **Batteries**

4x 225Ah main batteries, 2 x 160 Ah. starting circuit and 2x 225 Ah. bow thruster. All batteries are from Mastervolt and are AGM maintenance free. All batteries are fastened with straps in a welded construction.

### **Additional Battery Charger**

A Mastervolt, Chargemaster 24/30 - 3 outputs proportionally controlled battery charger will be installed in the engine room.

### **24 VDC main switch box**

A 24 VDC switch box will be installed complete with an auxiliary switch, diode, Volt – and Ampere meter, automatic fuses for six lighting groups, automatic circuit breakers for 24 Volt users and three reserve groups.

**24 VDC switch panel dashboard**

A 24 VDC switch panel with switches for the windscreen wipers, navigation lighting, horn etc. will be installed near the dashboard.

**Lighting, wall sockets and wiring**

Light plan is upon customer wishes

Standard: Luxurious LED lighting 26x, dimmer for saloon lightning, bedside lights LED, 4x.

TV

On a location of choice a 43 inch TV. (optional: installed on a tv-elevator)

**Audio**

Fusion FM/USB/Bluetooth + 2 speakers

**Navigation lights**

Navigation lights with stainless steel housing in accordance with international requirements.

The positions of the navigation lights are the following:

- 1 navigation light starboard
- 1 navigation light portside
- 1 stern light
- 1 combination anchor light/ steam light

**Signal horn**

Signal horn is located in the mast.

**Windscreen wipers**

2 double armed windscreen wipers will be mounted, a 24 Volt electric windscreen wiper, type ES, manufactured by Speich with synchronic interval (Speich dual control) with parallel arm and wiper.

## **14. INTERIOR, CARPENTRY**

The interior lay-out is based upon customer wishes.

**Design and construction carpentry**

The interior will be built upon customer requirements: the standard specifications include 2 cabins with owners cabin in the front, different types of wood standard, luxurious upholstered panels, luxurious salon and cockpit table, Metroflor PVC flooring, full upholstery entire yacht including cockpit cushions (Steeler Collection), captain's chair, luxurious matrasses, stainless steel door fittings, stainless steel cabinet fittings and stainless steel hatch fittings.

Standard equipped with 1x wet cells with shower and toilets (electrical toilets), stainless steel sink unit, one handle mixer tab, shower with mixer tab and luxurious Corian Work surface.

**Domestic appliances**

Standard the galley is equipped with Luxurious Corian Work surface, Stainless steel sink unit, one handle mixer tab, stainless steel 4-ring gas stove, cooker fan, 130 litre fridge with freeze unit, combi oven/microwave (Siemens), waste bin.

## **15. DOORS, WINDOWS AND PORTHOLES**

### **Saloon/wheelhouse**

Insulated (partially curved) double and frameless glass.

### **Hull**

- 2 x Insulated tinted panorama windows in hull (high-impact resistant)
- 6 x Opening aluminium portholes with mosquito screens in hull recess

### **Superstructure**

- 1x Flush opening hatch with mosquito screen and blind.

### **Door in Saloon**

Aluminium entrance doors to saloon and wheelhouse, 3-pcs folding with insulated glass

## **16. EXTERIOR**

### **16.1 Anchor system**

- 30 kg stainless steel polished anchor
- 40 metre galvanised 8 mm anchor chain

### **Windlass**

Electric windlass 24VDC with deck push buttons.

### **16.2 Flexiteek**

Standard equipped with Flexiteek on the cockpit floor.

### **16.3 Cockpit table**

A luxurious cockpit table is fitted on stainless steel pedestal.

### **16.4 Nameplates**

On both sides of the yacht Steeler logo and type of the yacht will be fitted in stainless steel. On the stern in stainless steel character's name of the vessel will be placed. The characters will be high-polish finished.

### **16.5 Guardrail**

On the hull around the foredeck and gangways a guardrail will be placed. Rail stanchions and rail made of approx.. 35 mm stainless steel tubes. Steel construction under stanchions is reinforced. Amidships on port and starboard a rail opening is located. Stainless steel fender strip around protection strip and bathing platform.

### **16.6 Bollards and cleats**

All cleats stainless steel 316.

In total 6 fixed cleats with rubbing plats under the bollards will be fitted.

### **16.7 Boarding ladder**

A stainless steel 316 boarding ladder will be delivered.

The boarding ladder is detachable and to be stowed away in the storage.

### **16.8 Swimming ladder**

A fixed swimming ladder is mounted at the stern of the yacht.

### **16.9 Navigation mast**

Radar mast from Stainless Steel.

## **17. EQUIPMENT AND SAFETY**

### **Mooring ropes**

4 Luxurious mooring ropes, black, length 14m, 14mm.

The mooring ropes will be provided with an eye on one side.

### **Fenders**

Six black fenders, diameter ca. 30cmx90cm height, each with an eye on each side and 12mmx2,5m luxurious nylon lines.

### **Diesel**

The yacht is delivered with 400 litre diesel.

### **Flags**

Pulpit equipped with a stainless steel jack staff (brace), holder and flag.

Near the stern a stainless steel flagstaff holder will be placed with a stainless steel flagstaff and national flag.

### **Fire extinguishing system**

In the engine room an automatic fire extinguishing systems installed.

Three portable fire extinguishers, 2 kg. with holders installed by arrangement with customer.