



# SEABOATS

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## NEW BUILD - 18m Fast Patrol Boat



### Listing ID - 674037

**Description** NEW BUILD - 18m Fast Patrol Boat

**Date** BUILT TO ORDER

**Launched**

**Length** 18.6m (61ft)

**Beam** 4.6m 15ft)

**Draft** 0.83m (2ft 8in)

**Location** ex factory, China

**Broker** Geoff Fraser  
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**Price** POA

### Highlighted Design Features

1. High speed in rough seas with superior acceleration and maneuverability;
2. Excellent seakeeping ability with very low slamming in all defined sea conditions for best crew comfort and safest operations;
3. Truly dry deck at all speeds with extremely excellent stability for special forces operations;
4. The hull form, propulsion system and structural strength in the refined version have been optimised to offer higher max. speed with superior capacity to sustain high speed and crew comfort in rough seas, based on no significant cost increase.
5. Client: Sao Tome e Principe Coast Guard (Boat under build and to be delivered on May, 2015)

### Design Purpose

This KINGTOUGH 18M Fast Patrol Boat is designed as a multi-functional platform with superior seakeeping ability and excellent stability to perform special forces operations in an extremely shallow riverine and coastal environment to focus on

below operating missions/purposes:

- a. Terrorist activities interdiction;
- b. Coastal and offshore defense against illegal activities and smuggling.
- c. Interception of hostile vessels;
- d. Fishery control;
- e. Protecting natural resources against unauthorized exploitation;
- f. Offshore facilities protection;
- g. SAR operations;
- h. Detecting and fighting sea pollution;
- i. Oil field security and protection;
- j. Mid-range combat operation.

### **1.1 General Description**

This specification describes the design and construction of the tactically-seized, proven reliable, rough sea-going 18M advanced composite vessel which will be arranged as a fast patrol craft (hereafter referred to as “vessel”) to use in coastal waters of Sao Tome e Principe, with armor and equipment capacities to focus on below Operating missions:

- a. Terrorist activities interdiction;
- b. Coastal defense against illegal activities and smuggling;
- c. Interception of hostile vessels;
- d. Fishery control;
- e. Protecting natural resources against unauthorized exploitation;
- f. Offshore facilities protection;
- g. SAR operations;
- h. Detecting and fighting sea pollution;
- i. Oil field security and protection;
- j. Mid-range combat operation.

The vessel will be constructed to a high commercial standard with particular attention to minimising noise transference and vibration while enhancing structural rigidity and offering best crew comfort.

### **Principal particulars:**

- Length (Overall):18.6m
- Length (Hull): 18.1m
- Length (LWL):16m
- Beam (Overall): 4.6m
- Beam (Hull): 4.2m
- Displacement (lightship load): Approx. 19 tonnes
- Displacement (half load): Approx. 21.5 tonnes
- Displacement (full load): Approx. 24 tonnes
- Draft (Hull): 0.83m
- Draft (Propeller): 1.0m
- Bow entry deadrise: 51 deg.
- Midship deadrise: 25 deg.
- Stern transom deadrise: 13 deg.
- Engines: 2 x VOLVO D9 313KW @ 2200RPM
- Gearbox: 2 x ZF 305-3
- Propulsion: 2 x FPP (fixed pitch propeller)
- Max. speed: 22 knots at half load/100% MCR/Beaufort Scale sea state two/clear hull

- Cruising. speed: 20 knots
- Range: 800 NM at 20 knots service speed
- Range: 1150 NM at 18 knots economical speed
- Compliment: 10 persons (1 x commander+1 x chief engineer+4 x crew+4 x passenger )
- Accommodation cabins: 1 x chief engineer + 4 x Crew + 1 x vessel's commander
- Seakeeping ability: Sea state 6 according to Douglas Scale
- Construction: Advanced composite to be 3D infused using on-line technology

## **1.2 Design and Attributes**

### **i. Vessel Layout:**

The vessel will be designed with layout shown as per the GA drawings.

The special layout for machinery, accommodation/mess room, control stations, etc is ergonomically optimized while the position of the each console center is located to give best pilot visibility and driving comfort for sustained operations.

### **ii. Hull Form:**

The hull form is well proven and will be multi-chined, slightly deep-keeled, variable deadrise deep V high performance form with a fine forward entry, flared bow, wide chine flats and planing flats.

The bottom lines are semi-planing in form and will be rising up towards the stern in order to reduce buoyancy in the the transom and adjust LCG forward for high speed but flat, smooth and comfortable ride in rough seas.

### **iii. Attributes:**

The vessel is designed to provide the following attributes:

- Superstructure with minimal windage drag/silhouette profile.
- A life span of 10 years, allowing for 1500 running hours of average annual usage with sustained operations of 10-12 hours/ day.

### **iv. Operation Conditions:**

The vessel is ability to operate in the following extreme tropical conditions:

- Ambient air temperature of up to 35 deg C.
- Sea water temperature of up to 25 deg. C.
- Relative humidity of up to 90% at 35 deg. C.

## **1.3 Compliance and Survey**

The vessel is to be surveyed to latest Rules and Regulations for the Classification of RINA, notated as PC Hull 1 Mach, patrol, coastal navigation.

As such, the vessel will meet the requirements in the PC Hull 1 Mach, patrol, coastal navigation rules and shall comply with the requirements of main class for stability purposes of the RINA "Rules for the Classification of Ships".

The Builder will appoint an approved Surveyor to carry out survey inspections during construction as per Survey requirements.

## **1.4 Quality and Control**

The shipyard is accredited to ISO 9001:2008 which is certified by RINA and CCS, both are members of International Association of Classification Societies (IACS).

## **1.5 Documents**

The following documents will be used for the construction of the vessel:

- Design Document Package
- Vessel Specification Document
- Survey regulations as determined.
- Components suppliers documentation.

In the event the drawings differ from this specification, the specification will take precedence.

### **As Built Drawings:**

Three sets of drawings as per normal boat building practises will be supplied in English language upon the vessel completion corrected to 'As Built' as follows:

- General Arrangement Drawing
- Engine Room Arrangement
- Main Engine Shafting
- Ventilation Arrangement
- System Schematics
- Electrical Installation and Schematics

### **Reports:**

Three sets of the following reports will be provided in English language upon the vessel completion:

- Vessel stability
- Sea trials
- Calibration/Alignment of propulsion equipment

### **Manuals:**

Three sets of the following manuals shall be provided in English language upon the vessel completion:

- Main Engines
- Propulsor Units
- Generator Set
- Air Conditioning plant
- Navigation Equipment
- Builder generated component list detailing suppliers contact details

### **Certificates:**

The following certificates shall be provided in English language upon the vessel completion:

- Builder's certificate.
- Classification certificate.
- Speed trial certificate.
- Compass adjustment certificate.
- Fire fighting equipment.
- Navigation lights.
- Life saving appliances.
- Manufactures statement of origin.

## **1.6 Material and Workmanship**

The Builder shall construct the vessel in a thorough and workmanlike manner.

The Builder shall construct the vessel in a manner consistent with best trade practices and in accordance with good commercial quality finishing.

All materials used and equipment fitted shall be of good marine quality and suitable for its intended application.

### **1.7 Alternatives**

The Builder may wish to propose alternative materials, equipment or methods which would be more economical and/or practical for the Builder to supply and fit than those stated in this specification. In such cases the Builder will discuss the proposal with the Purchaser, and obtain the Purchaser's approval prior to proceeding with the alternative.

Equipment marked "or equal" may be substituted for equivalent quality items, subject to approval by the Designer and the Purchaser.

### **1.8 Weight Control**

The builder is to be responsible for maintaining strict weight control throughout the project, with constant reference to the designer-supplied weight study. The builder is to advise the designer any items of equipment or fitout which are significantly different from the allowance made for in the weight estimate.

The builder will also weigh the following components/stages when completed and provide the results of LCG/mass to the designer:

1. Completed Hull shell.
2. Completed Deck/Cabin shell.
3. Completed internal structure.
4. Completed Boat.

Depending on build process, these weight measurements may take the form of additions/deductions from previous weights.

Weighings are to be completed on scales with a calibration certificate.

### **1.9 Owner Supplied Items**

The following items are to be owner supplied and thus are not included in the scope of the builder's supply:

- 2 x guns as per defined by shipowner, each mounted on forward weather deck and aft weather deck as stated in the GA drawings.
- Related components, cables, software, etc if applicable

These items, however are included in the full load or trials condition of the vessel and are considered to be installed by shipowner after the vessel arrives the destination.

The shipyard will be responsible to build the gun mounts as per specified by shipowner.



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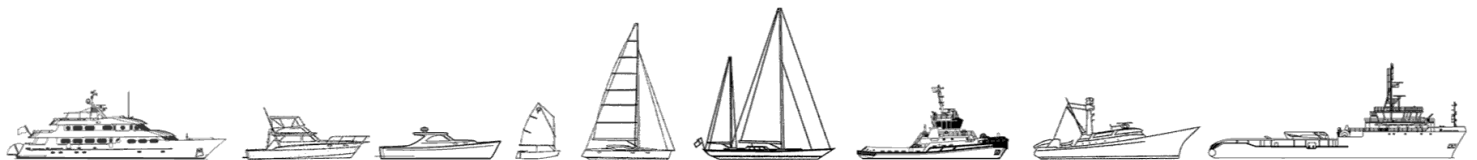








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