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# **NEW BUILD - 13.6m Fast Interceptor**



## Listing ID - 410124

Description	13.6m Fast Interceptor
Length	14.10m (46ft 3in)
Beam	3.46m (11ft 4in)
Draft	0.76 (2ft 6in)
Location	ex factory, China
Broker	Geoff Fraser geoff.fraser@seaboats.net +64 21 61 222 5
Price	POA

This Fully Ballistic High Speed Interceptor Boat is re-designed as a multi-functional platform with armor and equipment capacity to perform Special Operation Forces in a riverine, coastal and inshore environment to focus on following missions/purposes:

- a. Anti-piracy, anti- smuggling and anti-drug trafficking operation.
- b. Search and Rescue operation in inland and coastal waters.
- c. Fishery protection and patrol in and around ports and coastal areas.
- d. Disaster relief operations.
- e. surveillance.
- f. Short range interception. Hull Form

This Interceptor Boat is featured with monohull deep-V & two stepped hull. Engines to be inboard diesel driven by twin Arneson surface drive deducted by ZF gearbox. Hull and superstructure are to be 3D infused using Vinyl ester and Kevlar to enhance strength and rigidity while reducing weight.

This Interceptor Boat is designed to reach a max. Speed of 55.1 knots in sea state one on the base of designed displacement, however, actual boats are proven to be able to reach 57 knots at the displacement of 10.8 t. This Interceptor Boat is designed to offer a cruising speed of 30 knots on condition of full load.

### Fuel/Lubricating Capacity:

Fuel capacity for departure 771.27kg Lubricating capacity 4.00kg

This Interceptor Boat is able to offer a cruising range of 250 nautical miles at economic speed on condition of full load and able to offer a cruising range of 180 nautical miles at max. Speed on condition of designed load.

Autonomy of this Interceptor Boat is decided on condition of the storage amount of fresh water and food.

The design of this Interceptor Boat is able to meet one-compartment floodability and to secure the GA positive in the event of any damaged compartment.

The stability of the Interceptor Boat is able to meet the rules and standards of RINA and CCS(China Classification Society).

Sea-keeping ability of the Interceptor Boat is able to withstand a breaking force caused by sea state 7.

6 persons (one pilot + one co-pilot + 4 crew).

Maneuverability of this Interceptor Boat is featured with below characteristics:

a. Extremely sharp turning diameter at max. Directional speed to be actualized within

8 boat lengths.

- b. Time to accelerate speed from zero to maximum to be within 15 seconds at normal displacement.
- c. Blind area to be 1.35 boat lengths in the event of the boat being in a static state.
- d. Blind area to be 1.99 boat lengths in the event of the boat being at max. speed.

#### 1.9 Bulkheads and Compartments

The Interceptor Boat is featured with four transverse watertight bulkheads to be built to shape five sub-divisions as follows: a. Bulkhead at Frame 0#: to be created as fore bulkhead for aft-peak tank and aft bulkhead for engine room.

b. Bulkhead at Frame 5#: to be created as fore bulkhead for engine room and aft bulkhead for wheelhouse.

- c. Bulkhead at Frame 10#: to be created as fore bulkhead for wheelhouse and aft bulkhead for crew accommodation.
- d. Bulkhead at Frame 15#: to be created as fore bulkhead for crew accommodation and aft bulkhead for fore tank.

Hull structure:

- Hull and superstructure are to be 3D infused using fibre glass reinforced plastic. as below:
- Stern transom plate is to be core-materialized using NS-3 composite plate and pinewood.
- External force calculation and structural strength calculation are to be made as per

rules set forth in CCS (member of IACS) standards and can be easily adjusted to meet RINA rules, etc.

- Structural Form and Longitudinal Frame Spacing

- The main hull is to be constructed using longitudinal frames to be separated by watertight composite foamed bulkheads to shape compartments for the installation of required mechanicals and equipments while the superstructure using single-skin construction.

The whole hull is constructed to be connected using one-step molding technology. In case of second-molding process for the construction of some small parts, the surface of connection points shall be polished and napped and then to be washed to keep joint surface clear and dry.

The gunwhale of this Boat is to be fitted with "D" shape thick rigid rubber outer surrounded by stainless steel sheet as fender to act as protection to the boat from impact when intercepting other boat at high speed. Besides, an convex anticollision rail is designed at each side of outer 131#/2~bow to avoid the bow splash and sharp impact.

Deck fittings and Hardware Anchor System: The Anchor system in the fore tank consists of below equipments: 1 x Matrosov anchor (15kg). 1 x anchor cable

## Deck Fittings:

- 2 x cleat at each side deck
- 2 x davit bollard at each side wall
- $1 \times$  bollard cleat at the centralline of fore deck.

### Steering System

The steering system is to be realized by the easy control of steering wheel, steering pump and ASD hydraulic steering unit to control the variable pitch movements of the surface drive.

### Handrails and mast

- a. 316# stainless steel handrails to be fixed around fore deck and aft deck.
- b. 316# stainless steel handrail to be fixed at each outer side of the open hardtop.
- c. 1 x 316# stainless steel stern water-level platform.
- d. 1 x 316# stainless steel "door" shape mast.

### Life Saving Apparatus

- 1 x life buoyancy fixed with the handrail on aft deck.
- 10 x life jacket in the storage on the left side of console center.. 2 x carbon dioxide extinguisher.
- 2 x dry powder fire extinguisher.
- 1 x fire ax.
- 1 x fire bucket.

Deckhouse floor and crew accommodation floor are laid with PVC resilient floor.

### **Deckhouse Fittings**

- $1 \times pilot$  chair on the right side of the floor.
- 1 x co-pilot chair on the left side of the floor.
- 1 x ammunition box on the left side below the chart table.
- 1 x centralline watertight single door as access from deckhouse to crew accommodation. 6 x shock-absorbed seats.
- **Crew Accommodation Fittings**
- 2 x single beds.
- 1 x ammunition box.

1 x kitchen table-board on which are 1 x oven, 1 x cupboard and 1 x water sink and below which is 1 x air-conditioing box and 1 x storage.

1 x toilet with 1 x wash basin, 1 x patented toilet device and 1 x toilet paper holder.

#### **Doors Fittings**

1 x central double door as access from console center to crew accommodation.

1 x folding door as access from crew accommodation to the toilet.

Windows Fittings

1 x Fore bulletproof glass with windshield wiper for protection of crew and pilot

from front side. 3.10.2 1 x

3 multifunctional skylight in the ceiling wall of crew accommodation.

**Hatches Fittings** 

1 x hatch for fore tank.

1 x hatch for tank cleaning port.

1 x large engine room hatch cover for hoisting convenience of engines.

2 x small engine room hatch cover as access from aft deck to engine room.

Water Draining System

1 x self-water-draining system to be arranged in aft deck floor of crew accommodation.

1 x self-water-draining system to be arranged in outer doors and windows and air-draining windows.

Engineering System

The Mechanicals and equipments installed are as follows:

1 x hand-operated pump.

1 x removable bilge pump.

3 x battery.

1 x 12V DC distribution box.

- 1 x 220V AC distribution box.
- 1 x fire bucket.
- 2 x dry powder extinguisher.
- 1 x surface drive control system.

1 x stand-by fuel bucket.

Main Engine, Deduction Dear Box and Surface Drive The main engines installed in this high speed boat are 2 x Cummins QSM11-M (n=525KW,r=2500rpm) to be driven by 2 x ASD10, deducted by 2 x gearbox made

MG5091SG (reduction ratio=1.17:1).

Start-up Method for Main Engine and Related Devices

The start-up method for main engine is motor control and related devices are as follows:

- 2 x battery.
- 2 x motor start-up switch.
- 2 x field switch.
- 2 x start-up button.

Steering System and Measuring Instruments

The supply of fuel for 2 x main engine, ahead and astern running of gear box and surface drive can be actualized by using shaft control unit and hydraulic control unit in the console center.

The change of speed under normal operation can be actualized by using the control handle.

To create a best controlling and monitoring convenience for the pilot, the console center is also installed with below instruments:

1 x main engine revolution meter for each engine.

- 1 x lubricating oil pressure gauge.
- 1 x water temperature gauge.
- 1 x fuel consumption gauge.
- 1 x rudder position indicator.
- 1 x surface drive control unit.

## Cooling Pipe System

Main engine fresh water pipe and lubricating pipe are already installed in the main engine supply's facilities and what need to do is only to add a sea chest to approach the sea water into the sea water pump of the main engine and auxiliary engine to cool the fresh water. After finishing the cooling of main engine, gear box, steering system cooling apparatus, the water will be exhausted outboard through exhaust pipe.

## Fuel Piping System

The fuel tank offers a capacity of 918L to be filled from the fuel port designed in the side deck, monitored by tank level indicator. The supply of fuel for the main engine is made through oil-water separator to give guarantees to the fuel quality.

## Engine Room Air Intake and Exhaust System

Air consumption for normal operation of main engine and auxiliary engine is intaken directly from the engine room.

- 1 x engine room air intake designed at each side deck of frame 6#.
- 1 x engine room air outlet designed at each side deck of frame 2#.

### Steering System

Operational change of main engine, gearbox and surface drive can be controlled in the console center with a list of indicating instruments for monitoring convenience as follows: 2 x Water temperature gauge.

- 2 x fuel pressure gauge.
- 2 x tachometer.
- 2 x current meter
- 2 x voltmeter
- 2 x fuel level indicator
- 2 x rudder position indicator.

Electric and Electrical System

The main particulars of power source are to be featured with DC 12V and AC 220V two-wire insulated distribution system.

Each main engine is powered by one shaft generating set.

Rotational speed range of each main engine is between 1000-2500rpm. In this case, a rated 14V of each shaft generating set is enough for the power consumption of related devices.

5.2.1.2 1 x KOHLER 3.5EFOZ 3.2KW/3000RPM/220V marine generating set is installed aft of the 2 x main engine in the engine room as AC single-phase power source mainly for air-conditioning system.

2 x 12V 6Q-150 battery to be paralleled with the shaft generating set for slow charging during the navigating procedures of the vessel. Besides, the 2 x battery can also be used for start-up power source for the auxiliary engine and emergency power source for internal applications in the event of lack of shore power.

### **Communication Systems**

On top of the hardtop is arranged with 1 x low-and-high sounding horn. 1 x hand-held loud speaker in the console center; 1 x fixed loud speaker below masthead. **Communication System** 

1 x IC-304 VHF wireless phone. 1 x walkie talkie

1 x internal broadcast.

1 x external broadcast.

### Navigation Systems

1 x MR-1000R navigational radar. 1 x GPS-168C satellite navigator. 1 x A144 magnetic compass.

1 x seven-fold military telescope. 6. Ammunition

1 x 12.7mm post for heavy machine gun on fore deck.

2 x 7.62mm post for machine gun in the side protection wall of console center. 1 x ammunition box under the bridge in the console center.

### Others

2 x TMC DC electric windshield wiper for fore glasses of console center.

1 x copper thunder arrestor on top of masthead.

 $1 \times set$  of tools for main engine and others.

1 x flag.

















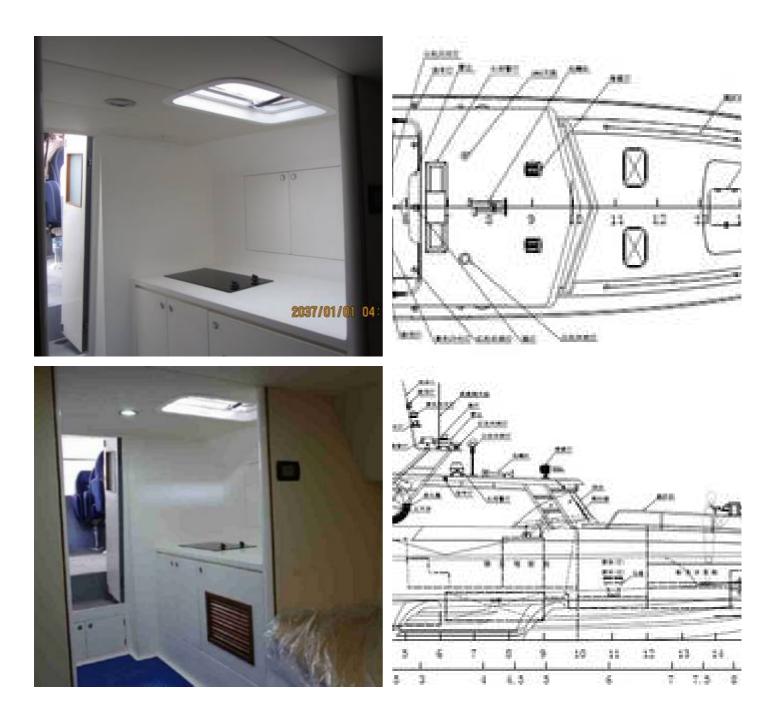












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