

# TECHNICAL SPECIFICATION

## GENERAL DESCRIPTION

A vessel suitable to carry 10-15 persons and 5-6 VIPs in addition. Vessels AFT shall be dedicated for VIPs with comfortable seating arrangements. The vessel shall be design to have good natural ventilation in comfort of all passengers. Despite to the size, the vessel shall exhibit excellent motions, maneuverability and operate comfortably at an optimum speed in moderate and rough sea condition (Sea Status 3 and 4).

## PRINCIPAL PARTICULARS

Hull form	: Mono hull
Hull material	: Fiber Reinforced (to specify the fiberglass resin used and details)
Classification	: Boat builder to specify (Documents to provide with the proposal)
Length over all	: 37 – 40 ft.
Service Speed	: <u>35 knots</u> or more at <u>medium load</u>
Passenger	: Max. capacity to be specified on the proposal
Sea Keeping and	: Vessel shall exhibit excellent motions and maneuverability in moderate
Maneuvering	and rough sea condition (Sea Status 3 and 4)
Endurance	: <u>5 hrs. minimum</u>

## TANK CAPACITIES

Fuel oil capacity	: To specify by the builder or supplier, for a minimum 5 hrs. endurance at optimum speed (Tank size and estimated endurance to be detailed on the proposal).
Water tank	: 200 liters minimum.

## ENGINE AND STEERING SYSTEM

- Four stroke outboard engines with gear and propeller.
- Engines to have local authorized distributor and service provider.
- Hydraulic Steering system including steering wheel with power assist.
- Electronic engine control system is preferred, if another system is suggested builder to specify as an option for owner to select and decide.
- Complete installation of engines with all required accessories.

## GENERAL FEATURES

- Hard Top double finishing.
- Hull in complete selected GREEN color gelcoat. (Double finishing reinforced hull).
- “MNDF” and “Pennant number” painted “Black in color” on both sides of freeboard (sizes to be decided when hull is completed).

- Minimum 03 coats of Anti-fouling (selected color), undercoats as per manufactures guidelines (antifouling to be 2 inches above water line).
- Nonskid flooring on decks.
- Built-in boarding steps with comfortable SS stand support (bow side).
- Semi-closed Extended cabin with windows in black tinted glass and rest covered with canvas using zips and bungee loops. Canvas zippers, well stitched and covered with canvas from both sides (provide sample for selection).
- Upholstered seating arrangement for passengers with comfortable back rest and SS hand arm rest (provide sample for selection).
- VIP seating arrangement to be discussed or provide options for owners to decide and select (provide with drawing to selection).
- Comfortable upholstered cushions for driver and crew necessary hand railings (seat cushion thickness 08-inches).

## **BASIC FEATURES**

- Deck cleats, two on forward, two on aft cock pit and two on amid ship (8-12 inch).
- Bow U-bolt clamp.
- Sliding pilot side windows.
- Deck wash with outlet shower fixed on PORT shipside rear entrance flushed to hull (Pipe length 50 Ft).
- Plumbing arrangement with necessary valves and taps for engine flushing
- Boat mirror (For Driver).
- Stainless steel hand railings where required.
- SS swim ladder.
- Fuel filling point with markings located on gunwale of the STBD side.
- Fresh water filling point with markings located on gunwale of the PORT side.
- Water drying fire retardant carpet (to provide sample for selection).
- Fixed SS drain plates for deck draining points.
- Built in water bottle holders (to be discussed).
- D - fender to be fixed with SS bolts and SS nuts (D- fender joints to be located near bow)
- SS guard plate to be fixed on stem.
- Fuel and water level sensors fixing arrangement to be made with coaming. Provide access to fuel and water sensors from deck (Deck Plates).
- Overhead cushion strips where necessary.
- Deck plates, to access critical electrical connections or any other equipment that needs access.

## **ELECTRICAL SYSTEM**

- Blue LED beacon bar visibility minimum 4 NM.
- Wipers for both windscreens with water splashing mechanism.
- Electric horn (SS preferred).
- Suitable Electric Trim Tabs fixed on transom
- Electric blower, for aft bilge ventilation.

- Mini bar (Drawer type preferred).
- Batteries
  - Battery for house current (charging arrangement from engine)
  - Batteries for each engine
  - Selector switch able to select from separate to both
- 2 USB charging points near both driver and crew seats.
- 300-500 W power inverter for AC outlets.
- 2 in Nos AC outlets.
- USB charging points for VIP seats (water proof).
- Deck lights.
- Fresh water Pump. (Deck washing, engine flushing and toilet).
- Switch panel 12V DC with marine breakers for all electrical equipment's and outlets.
- 1x AC waterproof power outlets with universal pins near helm and crew seat.
- Marine grade music player with Bluetooth and FM radio function.
- Automatic electric bilge pumps in required compartments (Pump Capacity: 2000-3000 gph).

## NAVIGATION, COMMUNICATION AND SAFETY EQUIPMENT'S

- **Navigation**
  - 12" Raymarine Multifunction Display
  - Rader Scanner (Quantum 2)
  - Through Hull Transducer
  - Raymarine i40 wind Meter (with Direction)
  - GPS Antenna with STNG, Cable and Maldives map
  - Raymarine AIS
  - RC led Search light
  - Compass with light
- **Communication**
  - MF/HF Complete (Sailor m802 (250 w))
  - TETRA base station complete (model: MTM800)
  - Marine VHF complete (Raymarine)
  - Isat 2 Satellite Hand held phone (Inmarsat)
- **Safety Equipment's**
  - SART (Sailor SART)
  - EPIRB (McMurdo)

**Note:** - Specific brand for some of the items are selected for easy interfacing with other equipment and service provider availability.

## HELM CONSOLE

- Black top surface for anti-reflection.
- 2 Nos DC USB outlets for phone charging.
- Red ceiling light for helm (LED light)
- 1x AC waterproof power outlets with universal pins near helm and crew seat.
- If console is closed natural ventilation shall be provided.
- All necessary controls and display arrangements on helm.
  - PORT and STBD engine display
  - Navigation light switch
  - Search light switch
  - Cabin light switch
  - Deck light switch
  - Stern light switch (Engine service light)
  - Water Pump switch
  - Bilge pump switches
  - Blower switch
  - Wiper controls
  - Trim tab gauge and controls
  - GPS and Rader display with power on/off switch
  - Engine throttle
  - Fuel tank level gauge
  - Water tank level gauge
  - Battery voltage indicator digital

## TOILET

- Marine Electric Toilet
- Entrance door with locking mechanism from b both sides
- Wash basin with fresh water tap
- Toilet Mirror
- Ventilating blower
- Sky shower
- Proper lightings with water proof switches
- Hand shower
- Hand support railings
- SS Toilet Roll Holder
- SS Towel Hanger
- Additional step if necessary

**LIFE SAVING EQUIPMENT'S**

- 02 x portable fire extinguishers embedded to hull in closed boxes, fixed in easily accessible areas (c-thru doors for boxes)
- 02 x Fire blanket
- Self-Inflatable life jackets (Adults) for maximum capacity
- 04 x self-inflatable life jackets for kids.
- 02 x Life Ring (fixing point to be decided).
- 01 x Sanitizer stand holder.
- First Aid Kit (below is the list of Items to include in the first aid kit)

#	QTY	UOM	Description	#	QTY	UOM	Description
1	1	Nos	AED	16	1	Bot.	Betadine Solution
2	1	Nos	Oxygen cylinder with carrying Case	17	1	Tub.	Betadine ointment
3	2	Nos	O2 Tubing Mask/Nasal Prongs	18	1	Bot.	Optrex eye lotion
4	1	Nos	Cervical Collar (adult)	19	1	Bot.	Moov Spray
5	1	Nos	Scissor	20	1	Bot.	Merbromin
6	1	Nos	Torch penlight	21	1	Bot.	Calamine Lotion
7	1	Nos	Tactical Tourniquet	22	1	Oint	Mupricon
8	1	Nos	FA Bag	23	1	Nos	Asthalin Inhaler
9	10	Tab.	Emeseg 4mg	24	1	Nos	Crepe Bandage
10	10	Tab.	Faxofenadine 180mg	25	5	Nos	Roller Bandage 7.5x3
11	20	Tab.	Uphamol 650mg	26	2	Nos	Triangular Bandage
12	10	Tab.	Dompan OD	27	4	Nos	Micropore Plaster
13	20	Tab.	Panadine	28	50	Nos	Band Aid
14	10	Pkt	Citro sod/Eno	29	2	Nos	Eye Pads
15	5	Tab.	Cetirizine 10mg	30	100	Nos	Disposable gloves

**BOAT EQUIPMENT'S**

- 01 x SS Anchor (Type Danforth)
- 01 x Flag set (CB – 5)
- 02 x Buckets (08 Liter)
- 01 x Hand mirror (small)
- 01 x Torch light (water proof)
- 01 x Boat hooks
- 02 x F-4 Fenders
- 02 x F-5 Fenders
- 01 x 100ft 14mm Rope for berthing (Yacht Rope)
- 01 x 150ft 16mm Rope for anchor
- 01 x 50m Flexible hose reel
- Snorkel, Mask, Fins (03 sets)
- 04 x Raincoats
- 02 x Aluminum foil foldable wind shield reflector (helm equipment protection)

## TOOLS

- 01 x Oil extractor pump (engine Oil change)
- 01 x Wrench set (sizes 8-24 mm)
- 01 x Wrench (size 27 mm)
- 01 x Allen key set (7 pcs)
- 01 x Tool box (18")
- 01 x Ratchet wrench
- 01 x Adaptor for extension (6")
- 01 x Nose plier
- 01 x Plier
- 01 x Adjustable Spanner 12"
- 01 x Adjustable Spanner 06"
- 01 x Socket set (sizes 8-24)
- 01 x socket (size 27 mm)
- 01 x Deep socket (size 14 mm)
- 01 x Screwdriver set
- 01 x Screw driver big (-),
- 01 x Screw driver big (+)
- 01 x Universal piece
- 01 x Hammer 1 lb
- 01 x Grease gun (flexible nozzle)
- 01 x Silicon gun
- 01 x Filter removing wrench for oil
- 01 x Filter removing wrench for fuel
- 01 x Strap wrench
- 01 x Line tester
- 01 x Cable cutter
- 01 x More gripper (medium size)
- 01 x Grease tin
- 01 x Tools Bag

## ESSENTIAL SPARES AND ACCESSORIES

- Necessary spares for Engine's 1<sup>st</sup> routine.
- Engine oil and Gear oil for 1<sup>st</sup> routine maintenance.
- 01 x Complete Gear with salt water propeller
- 1 x Parts Catalogue for main engine
- 1 x Service Manual for main engine

## TRIALS

- Engine break-in period to be completed with the guidance of engine supplier.
- Vessel shall be tested at different speed, under different sea status. These trial tests to be initiated after engine break-in period.
- All the trials and equipment tests shall be carried out in the presence of an owner and builder appointee.
- All trial data check sheets to be finalized and signed by both the parties.

## WARRANTY AND OTHER DOCUMENTATIONS

- **Hull**
  - Minimum **5years** shipbuilder warranty from the date of delivery. All warranty documents issued by the manufacturers for property articles shall be transferred to the owners.
  - Any repair on hull or superstructure that is raised from non-abusive usage, to be attended by the supplier or the shipyard promptly, within a reasonable scope.
  - Supplier or Builder shall have their own facility for repairing and maintenance of hull
  - If the proposed vessel is classified under any class, document copies shall be provided with the tender proposal.
- **Engines**
  - **1year** warranty from the date of delivery.
  - Engines shall be procured with full consent of local distributor or service provider in Maldives with all services and warranty issues being obligatory to such parties.
- **Equipment and accessories**
  - **1year** warranty for all equipment's and machineries installed onboard from the date of delivery.
  - Any defects that are raised from non-abusive usage with in this 1 year, shall be attended by the supplier or builder.
  - If unable to fix any of the equipment's or repaired it shall be replaced with in 1 week. However, in case of unavailability of a critical item, the supplier or builder to give a delivery date not exceeding 1 month
  - Equipment and accessory details shall be mentioned in the tender proposal (eq: Brand, model etc...)

## **DOCUMENTATION AND LABELLING**

- Documentations to provide with the vessel
  - Hull warranty documents
  - Instruction manuals of equipment's
  - Service manuals
  - Trial Documents

- Checked list of all equipment's, accessories and spares that will be provided with the vessel
- Checked list of all the documents included in the box file (separate for each vessel)
- All the documents to be box filled and handed over while delivering the vessel
- Boat warning labels to be fixed where applicable. (First aid kit, Mind your head, Lifejackets, Sanitizer, Fire blanket, Fire extinguisher, No smoking etc.)
- Vessel Data plate to be engraved on a SS plate and fixed on the vessel.