

Date: 12-Oct-2020

Dear Sir,

Kindly find below our fiber boat requirements for your perusal and provide us your the best offer.

Thanks & Regards,

Savitri

Purchase Department

VIJAI MARINE SERVICES

S - 9, 34, Sapana Terraces,

Ground Floor, Swatantra Path

Vasco-Da-Gama,

Goa - 403 802

India.

Email: savitrivms2020@gmail.com

Website:-www.vijaimarine.com

REQUIREMENTS FOR FIBER BOAT			
	Description	Requirement	Quantity
	Hull type	Displacement hull	
	Hull dimensions	LOA 78FT, BOA (25 to 27FT) Max draught 6ft 10inch	
	Hull construction material	Fiber reinforced Plastic (FRP)	
	Normal Cruising speed	12 to 13 knots	
	Maximum speed	15 to 16 knots	
	Accommodation	Minimum 13 Persons	
	Portholes	300mm, aluminum anodized frames: Bunk compartment (x2 Port/Stbd side) Toilet/shower compartment (x1)	
	Type of hull construction	Single skin	
1.	Main Engine	Approx. 450-500 BHP (@ 2500 RPM.),	

		shaft drive, variable load with a continuous duty rating, in-line inboard diesel engine (Cummins, Yanmar, Doosan Daewoo or equivalent) with 24VDC alternator for engine battery recharge, electronic engine management system, fresh and/or sea water cooling water pumps, start/stop panel, electric starter motor, flexible engine mountings, air intake, elbow for wet exhaust system, and 24V deep cycle, 3 step charge, maintenance free battery for engine start.	
2.	Auxiliary Power Sources	High output alternator with smart regulator (approx. 110A, 24V, (70VDC @2500 RPM) for service/ inverter battery bank recharge with main engine and alternate. 25kW marine generator 380 or 440VAC (50HZ), three phase, with wet exhaust system and 12V battery for start with AC volt meter	
		and ammeter. (Kohler, Northern lights, Cummins Onan or equivalent). • Refer engine specs Sound proofing to engine room	
3.	Battery Boxes	Prefabricated RFP box for engine start, battery banks	
4.	Propeller and shaft	Fix pitch, tapered, stainless steel propeller shaft with keyway, thread, key, lock washer and propeller nut with integrated zinc anode.	
		Rigid coupling with cylindrical bore and clamping hub for propeller shaft [gearbox manufacture recommended or equivalent] 4 blade bronze/magnesium bronze propeller.	

5.	Stern Gear	<p>Water lubricated bronze/FRP stern tube with outer cutlass bearings, front and rear mounting flange, and flexible inner bearing with dual lip seal with rubber shaft sleeve /packing gland and water lubricating inlet assembly.</p> <p>Bleed arrangement from engine cooling system for water lubricated stern gear bearings and generator.</p>	
6.	Steering System	<p>Single station, wheel steered, single rudder, hydraulic steering system with helm pump with stainless steel tapered shaft, nylon/ copper tubing, and cylinder (vetus/corv equivalent).</p> <p>Stainless steel or teak outer rim with spokes on outer rim and single spoke in front of wheel, 400 – 600 mm steering wheel with hub to fit helm pump shaft.</p>	
7.	Rudder	Stainless steel/FRP single blade rudder with high strength stainless steel stock, rudder arm and rudder gland	
8.	Fuel Filters:	<p>Duel spin-on diesel fuel water separator/filter with vacuum gauge and 10 micron filters (Racor, Venus or equivalent).</p> <p>Single marine fuel filter for generator.</p>	
9.	Residual Current Devices (RCD)	<p>Main AC to inverter RCD rated at 32A, tripping current rating of 30mA and trips in no more than 30mS.</p> <p>AC GPO circuit RCD rated at 13A, tripping current rating of 30mA and trips in no more than 30mS.</p>	
10.	Battery charger	230VAC, 24V, 70A output, 3 step charge marine smart battery charger with high temperature shutdown, auto reset, reverse polarity and ignition protection, and LCD	

		charge indicator.	
11.	Inverter	24 VDC input, 230 VAC, 50Hz output, 4KW – 5KW Sine Wave power marine inverter(s) with heavy load start up for high peak consumption (minimum 1000W above continuous output rating), safe voltage shut down, and LCD function indicator and remote panel for full control over inverter/charger functions including variable battery charger load rating and remote on/off control.	
12.	Battery Monitor	State of charge battery monitor for voltage, current, and parameters including over voltage, temperature, and capacity (Ahr) during discharge and recharge, with an alarm for any parameter outside of specification and control for battery charging from solar panels or other unregulated sources.	
13.	Power converter	24VDC-12VDC step down power converter to wheelhouse	
14.	Battery switch	Heavy duty three position main battery switch, ignition protected, marine rated switch “On” position - start battery bank is isolated. “Off” position - service or emergency disconnect. “Both” position - joining the House and Start Battery Bank circuits in emergency cranking situations with less than 0.5V drop.	
15.	Earthing/ lightning protection	Heavy bus bar or bracketed common ground point. Copper bonding system with zinc anode.	
16.	Compressor room, dive & provisions stores	24VDC, 4m ³ /min intermittent use, blowers with flexible ducting, connectors and screens.	
17.	Bilge pumps	24VDC, 2500 L/min continuous rated bilge pump to crash bulkhead compartment with float switch, bilge strainer with non-return valve, “in operation” alarm, PVC	

		<p>pipings, elbows, thru-hull scupper and off/auto/ manual switch to wheel house (Jabsco or equivalent).</p> <p>24VDC, 24 - 30 L/min continuous rated flexible impeller bilge pump to engine/ generator bulkhead compartment with float</p>	
		<p>switch with, bilge strainer with non-return valve, "in operation" alarm, PVC piping, elbows, thru-hull scupper and off/auto/ manual switch to wheel house (Jabsco or equivalent).</p> <p>Bulkhead mounted 50 - <u>60L</u>/min manually operated high volume, self-priming, diaphragm emergency back-up pump to engine/ generator compartment (Jabsco or equivalent)</p>	
18.	Saltwater distribution system	<p>24VDC, high pressure, 100 L/min, self-priming deck wash/ general service pump with non-return valve (suction side) and strainer (Jabsco, Rheinstrom or equivalent).</p> <p>PVC main line, distribution line with reducers, elbows, tees, end caps and valves.</p> <p>Cabin/tank side mounted 304 Stainless Steel female hose connectors (quick connect) with check valve at aft and fore main deck (Jabsco, quad or equivalent).</p>	
19.	Sanitation system	<p>Non corrosive smooth faced main line, connection piping and reducers, elbows, tees, end caps, and valves.</p> <p>Prefabricated FRP Black/grey water tank(s) with minimum 600L capacity, overboard discharge, breather, vented</p>	

		<p>loop and thru hull scupper.</p> <p>24VDC tank discharge macerator pump with auto and manual override switch(s).</p> <p>Universal mounted 2500 L/min manually operated high volume, self-priming, diaphragm emergency back-up pump (Jabsco or equivalent).</p>	
20.	Exterior electrical fittings	<p>12VDC, 24VDC and 230VAC, 30 Amp watertight deck connectors</p> <p>12VDC, 10W waterproof ceiling lights.</p>	
		<p>AC and DC one way water proof switches for lights as per drawings.</p>	
21.	Internal electrical fittings	<p>24VDC/ 12VDC, 2 x 8 W, florescent ceiling lights to laboratory and galley with wall mounted on/off switches.</p> <p>12VDC, 15W dome cabin lights to wheelhouse, captain's heads, captains bunk compartment, shower rooms, scientist's cabins, corridors, office/ conference area and saloon with wall mounted on/off switches.</p> <p>12VDC wall mounted chart light in wheelhouse with on/off switch.</p> <p>13 Amp sockets to wheelhouse.</p> <p>AC /DC switches</p>	
22.	Navigation Lights	<p>12/24VDC Red/ Green Stbd and Port side, anchor light, stern light, steaming light.</p>	
23.	Navigation Equipment	<p>Surface/ bracket mounted, 4.5" – 5.5" dial compass with 12VDC nightlight.</p> <p>GPS with detailed map of Maldives (Navman or equivalent).</p> <p>12VDC, high pitch, chrome plated brass air – trumpet horn (Vetus or equivalent).</p>	
		<p>12VDC, waterproof search light with sealed</p>	

		beam, halogen bulb and remote control (Jabsco SL type, Golight or equivalent).	
24.	Alarms	Smoke detector alarms.	
25.	Helmsman's chair	Moulded shell with seat and lumber cushion, bulkhead mount, adjustable seat pedestal, footrest and seat support	
26.	Windscreen and Windows	Windscreen and side window frames to be leak proof prefabricated aluminum anodized frame fitted with flat panes of chemically toughened.	
27.	Wipers	12/24VDC, 36W, two speed, bulkhead mounted wiper motor(s) with wiper arms and blades (Exalto HD, Vetus or equivalent)	
28.	Portable Fire Extinguishers	Portable wall-mounted fire extinguishers shall be provided in the Engine room	
29.	Fixed CO2 Fire Extinguishing Systems	Install a fixed CO2 fire extinguishing system serving the engine compartment	
30.	Visual and audible alarms	Shall be mounted into a panel on the pilothouse control console. Visual and audible alarms shall annunciate when CO2 is discharged. The CO2 system remote actuation station shall be located in a stainless steel enclosure, outside the engine room.	
31.	Fire Axes	Two (2) fire axes with fiberglass handles shall be mounted in quick release stainless steel brackets, one in the Engine Room, and one other at a location as directed by Owner.	
32.	Self-Contained Breathing Apparatus (SCBA)	Shall provide and place aboard two (2) SCBA units, one with hard case and one with soft case, including air cylinders and a third bottle for spare use.	
33.	Fireman Outfits	Two (2) Firefighter Suits shall be provided each with a spare air tank with the vessel name stenciled on them.	
34.	Stainless rails,	Polished stainless steel 304 safety rail	

	awning frame and ladders	<p>tubing, with cast stainless steel bases thru-bolted to aft wheelhouse deck and aft main deck.</p> <p>Polished stainless steel 304 grab rail tubing with cast stainless steel bases thru-bolted to Stbd and Port side wheelhouse bulwarks.</p> <p>Polished stainless steel 304 awning frame with cast stainless steel bases thru-bolted to the aft main deck cabin.</p> <p>Polished stainless steel 304 safety rail to the observation platform with cast stainless steel bases thru-bolted to wheelhouse deck.</p> <p>Polished stainless steel 304 hand rail tubing with cast stainless steel bases thru-bolted to main deck/wheelhouse deck staircase.</p> <p>Polished stainless steel 304 three step foldable stern ladder to be fitted to the dive platform.</p>	
35.	Deck fittings	<p>304 stainless steel fairleads. 304 stainless steel deck cleats.</p> <p>304 stainless steel deck bollards (100mm x 300 mml)</p>	
36.	Rub Rails	Structural upper rub rails with 304 stainless steel 3 inch capping.	
37.	Fastenings	<p>Exterior fastenings to be 304 stainless steel bolt shafts, nuts, screws, washers and spring washers.</p> <p>Wood and timber screws to be brass</p>	
38.	Windlass and anchor(s)	Approx. 900 - 1100 kg max lift rating with chain (diameter 10 -12 mm and 20 m, 24VDC, 1500W watertight motor casing, clutch release handle, rope capstan suitable for ½ - ¾" rope, with water proof	

		<p>foot control and hi Amp false -trip free circuit breaker (Vetus, Lofrans, Mako or equivalent).</p> <p>304 stainless steel pivoting anchor roller.</p> <p>15 - 20kg hot galvanised steel (G.B or danforth) type anchor.</p> <p>18mm and 25 mm anchor rope.</p> <p>Separate battery x2 for Windlass with deck switches</p>	
39.	Interior Floors	<p>Structurally reinforced FRP floor (fiberglass floor) to wheelhouse and main deck cabin.</p> <p>Accommodation deck floor to be timber frame fixed to centre guard with marine plywood flooring.</p>	
40.	Galley fit-out	<p>Integral double Stainless Steel sink with drain fittings.</p> <p>Freshwater and saltwater Stainless steel, separate taps for water and salt water.</p> <p>24VDC mounted electric fan (Vetus or equivalent) with permanent ventilator (Hollex, UFO or equivalent).</p> <p>Gas detector alarm 24VDC florescent tube light.</p> <p>DC switches.</p> <p>DC sockets</p>	
41.	Wet Lab fit-out	<p>Integral single sink with drain fittings and freshwater Stainless Steel mixer.</p> <p>Permanent ventilators (UFO, Hollex or equivalent).</p>	

		24VDC florescent tube light. 24VDC wall mounted 8" oscillating fan. DC switches. DC sockets	
42.	Dry Lab fit-out	24VDC wall mounted 8" oscillating fan (14 Nos.). Permanent ventilators (UFO, Hollex or equivalent). 24VDC florescent tube light. DC switches. DC sockets	
43.	Wheel house fit- out	24VDC wall mounted 8" oscillating fan.	
		12VDC map light.	
		12VDC dome ceiling light	
		DC switches.	
		DC sockets	
		Connection to ventilators (UFO, Hollex or equivalent).	
44.	Saloon fit-out	12VDC dome ceiling light 24VDC wall mounted 8" oscillating fans. Connection to ventilators (UFO, Hollex or equivalent). DC switches DC sockets	
45.	Conference / Office fit out	24VDC wall mounted 8" oscillating fan	
		12VDC ceiling light	
		DC switches	
		DC Wall sockets	

		Connection to Ventilators (UFO, Hollex or equivalent)	
46.	Accommodation /Crew Cabin Fittings	Bunks with timber frames and slats with plywood bases.	
		24VDC wall mounted 8" oscillating fans.	
		12VDC Reading lights. 12VDC ceiling dome lights. DC switches DC wall sockets	
		Connect to central ventilators (UFO, Hollex or equivalent).	
		200mm (approx.) Stainless Steel/ anodized aluminum porthole frame with 8mm opening acrylic glass and latch. D-Board(s)	
47.	Shower room fittings	Glass / Stainless steel oval washbasin with stainless steel freshwater mixer and drain fittings. Freshwater water shower hose and mixer set, drain grate and fittings. 24V electric saltwater western type marine toilet with siphon breaker, solenoid, macerator, switch panel (Lavac or equivalent). Towel hanger, mirror, toilet paper holder and Muslim shower. 200mm (approx.) Stainless Steel/ anodized aluminum porthole frame with 8mm opening acrylic glass and latch.	

		12VDC ceiling lights DC switches 12/24VDC shaver sockets	
48.	Cathodic protection	The BUILDER is to install cathodic protection in accordance with standard marine practice.	
49.	Mandatory safety equipment	Antenna for Marine VHF and for MF/HF. Life Jacket Life buoy First Aid Kit Flag Set Fenders 1200 Binoculars Marine VHF with DSC MF/HF radio frequency Any other as may required	
50.	Tender	17' FRP tender vessel with 25 to 30HP outboard engine (Mercury, Suzuki or Yamaha) 800kg davits with winch	