

## Marine Aluminum catamaran

The vessel can operate within 6/12 miles from shore and is built under the survey of RINA, who releases the Declaration to obtain the Safety Annotation Certificate, issued by Italian Maritime Authority.

### MAIN CHARACTERISTICS:

- . Length o.a. : 13,90 mt
- . Breadth, moulded : 4,80 mt.
- . Depth, moulded : 1,80 mt.
- . Design draft : 0,75 mt.
- . Corresponding displacement : ab. 20,00 t.
- . Deadweight : ab. 10 t.
- . Speed at max displacement : 11 knots
- . Fuel capacity, total : ab. 2100 lt.
- . Fresh water capacity, total : ab. 500 lt.



**LARGE WORKING SPACE**

**LARGE LOAD CAPACITY**

**HIGH STABILITY**

**HIGHLY MANEUVERABLE SHIP**

**POWER AND LOW FUEL  
CONSUMPTION**



# MARINE ALUMINUM CATAMARAN

**GENERAL DESCRIPTION:** The hull is catamaran design. The deck is flat, continuous from aft to fore, built with antiskid treadplates. In the fore is mounted a bulwark of variable height from 800 to 1000 mm. to protect the deck against the sea billows. The hull is of chine line type, the stern is transom and give location to two foldable platforms, one each side, to enable the divers activity. On the deck house, fitted forward, 2,40 mt. wide, are arranged the wheelhouse, with entrance from both sides, as well as one service room, with its own entrance, used as sanitary and dressing room. N° 3 watertight bulkheads subdivide the hull in 4 compartments, one intended for the Engine Room location, the other to house auxiliaries and plants. Each catamaran hull has one deep keel, suitably designed to shield propeller and rudder, where is located the stern tube and the rudder support keel. The crane is arranged on the deck, forward of starboard side.

**A. HULL** The hull and the deck-house are in aluminium alloy 5083/H111, certified by RINA. The structure is mainly longitudinal type, with reinforced transversal frames spaced 1 mt.

**B. OUTFITTING BUMPERS** - Fitted on both external hull sides made in rubber/wood.

**PAINTING AND CATHODIC PROTECTION** Painting : It is foreseen an epoxy painting scheme for marine aluminium hulls recommended by International Paint Italia. Cathodic protection : N° 12 zinc anodes, 2 kg each, on the hull and n° 2 zinc anodes, 0,5 kg each, on each rudder blade.

**FURNISHING** The wheelhouse desk is in aluminium, painted same like the deck house interior. The service room in the deckhouse is equipped with w.c. bowl, sink with tap, shower.

**STAIRS AND PLATFORM** On the stern are located n° 2 foldable platforms, one each side, intended for diving operation, built with an aluminium profile frame, hinged to stern, lined with antiskid tread plate. The platforms are reachable by means of stairs steps welded to the hull. N° 6 aluminium vertical ladders are arranged in way of the hatchways for the access into the compartments below the deck.

## AUXILIARIES, PLANT AND PIPING

**Bilge plant :** Is foreseen one electric pump and one hand pump, capacity and pipe diagram according with RINA Rules. Pipes hot galvanized steel.  
**Fire/ballast/deck washing plant :** The services are performed by the Bilge el/pump. The pipe system is composed by hot galvanized steel pipes, sea valve, filter, hydrant with valve, fire hose, nozzle.  
**Fresh water system :** The plant is composed by n° 2 tanks, each ab. 250 lt, one electric pressure vessel with pump, PVC piping system for the water distribution to sanitary services and to an external shower with flexible pipe, mounted on the wall of the deckhouse.  
The piping system is arranged for the distribution of cold and hot water, produced by one gas boiler with gas bottle installed on the deckhouse roof. (Supply and installation of the boiler and gas bottle not included in the standard version)

**LIFTING MEANS AND MAST** N° 1, hydraulically operated, telescopic boom type crane with winch, equipped with disk brake and non-rotating steel wire rope. Lifting capacity kg 850/2400 at mt 9,9/3,65 respectively. The boom extension is 3-stage, the winch has a pull capacity of kg 2500 at double single sheave blocks. As crane safety devices are installed hook limit switch and moment limit. The hydraulic power is

produced by one oil pressure pump, geared by one of the two M.E. The pump is connectable to the engine by means of flexible cable system with hand control lever in way of the crane. Hydraulic system includes one oil collecting tank of 200 lt. capacity, filters, valves and high pressure flexible pipes.

**MOORING AND ANCHORING** N° 4 aluminium double blits, diam. 80 mm., two afterword and two foreward. N° 2 fairleads on the bulwark, foreward, one each side. Mooring ropes, anchors and anchors chain as per Equipment Number of RINA Rules.

**RUDDERS AND STEERING-GEAR** Two rudders, with blade and stock in st. st., mechanically connected with bar. Hydraulic steering system with n° 1 manual oil pump, common to n° 2 hydraulic cylinders, one each rudder, hydraulic tubing plus accessory fitting as required.

**ELECTRICAL PLANT** Electricity production: a) N° 2 Main Engines alternators, 24 V, 80 Ah - b) Shore connection via one Batteries Charger, 220/24 V, 60 A. Electricity accumulation: a) N° 2 battery groups for engines starting and ship services, each 200 Ah 24 V. b) N° 1 battery group for emergency services, 120 Ah 24 V. All the battery groups are continuously feeded by engines alternators.

Electricity distribution: a) Main switchboard with bar and switches for Ship Services b) Emergency switchboard with bar and switches for Ship Emergency Services c) Accesories like : Switches, Battery splitters, protection devices, relays, ecc. d) Electrical cables, provided with RINA Approval.

**NAVIGATION AND SIGNALLING EQUIPMENTN**  
Serán : N° 1 Magnetic Compass with RINA approval.  
N° 1 Siren with RINA approval  
N° 1 set of Navigation Lights, with RINA approval, control switchboard in the wheelhouse.  
N° 1 Searchlight, remote controlled from the wheelhouse.

## C. ENGINES PROPULSION

N° 2 Propulsion lines are installed, each composed by: Diesel Engine, 85 kw (150 hp) at 2800 rpm, 6 cylinders  
N° 1 Red/Inv Gear, 2,6:1  
N° 4 Engine Resilient Supports  
N° 1 Shaft Flexible Coupling  
N° 1 Tailshaft, in st. St., diameter as per RINA Rules  
N° 1 Stern tube, in aluminium, welded to the hull.  
N° 1 Shaft Support Bearing, water lubricated.  
N° 1 Shaft sealing device, flexible type.  
N° 1 Propeller, 3 or 4 blades, bronze  
For each Engines one Control Panel is mounted in the wheelhouse. Control panel is provided with indication and monitoring devices, such to enable to control the engines condition and performances.  
Remote control of the engines rpm and propellers direction from the wheelhouse, by means of flexible cables and dual levers.

**AUXILIARIES, PLANT AND PIPING** Fuel system : Each Engines is provided of one fuel service tank of ab. 400 lt capacity; it is as well present on board one storage tank of ab. 1250 lt. The fuel transfer is made by means of one electrical Transfer Pump. Engines cooling: Each engine is provided of independent fresh water closed circuit, cooled by sea water system, with sea valve and filter. Exhaust Gas: The system is of "wet" type, with raiser, water lock and rubber hose with RINA approval

**RULES**  
The unit is built complying with Rules pertaining to the issue and maintaining of the Safety Annotation Certificate of Italian Maritime Authority.

