

FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY

R/V MANTA Vessel Specifications



R/V MANTA

R/V MANTA serves the Flower Garden Banks as part of NOAA's National Marine Sanctuary fleet. The vessel design provides enhanced capabilities for on-board scientific data collection and diving operations, plus increased stability and speed needed for research, education, enforcement, and management of the sanctuary and surrounding waters in the northwestern Gulf of Mexico.

Builder: All American Marine Inc.,
Bellingham, WA

Design: Teknikraft Aluminum
Catamaran

Length: 82'08"

Beam: 30'

Draft: 6'

Freeboard: 5.5'

GRT: 77 tons

Cruising Speed: 25 knots

Maximum Speed: 35 knots

Fuel capacity: 3200 gallons

Fuel endurance: 600 nm (5 days)

Fuel consumption: 175 gallons/hour
(5 gallons/nm at 25 knots)

Berthing: 14 (10 science, 4 crew)

Passengers: Maximum 25 on day
trips

Deck Equipment

- Markey COM 7H oceanographic winch with 1000 meters of .322" electro-mechanical cable (on turntable) slip ring assembly
- Trawl Kinematics science winch with 1000 meters of 7/16" galvanized cable
- A-frame with 4500 pounds safe working load (SWL), has block with LCI-90 wire-readout
- Morgan model knuckle-boom crane with maximum reach of 10'6"
- Polaris 15'06" "Mobula": aluminum RHIB with 40hp Yohatsu (6.5 gallons fuel)
- Hydraulic connects on port side for hydraulic tools
- Hydraulic lines on starboard side
- Main deck tie-downs with 2'x2' pattern (.75" stainless steel eye-bolts)
- Moon pool opening approximately 2'x1.5'
- Pole mount brackets (no pole at this time)
- Observation area with fold down benches forward of the bridge
- 220VAC, 440VAC power hook-up
- Interchangeable main deck space
- Freshwater and saltwater hoses

Laboratory Space

- Seakeepers 1000 Automated Observing System. Includes surface CTD, dissolved oxygen, pH, redox, air temperature, barometer, wind speed, and direction. Observations are recorded continuously and transmitted every hour.
- HAZMAT storage locker, double stainless steel sinks (freshwater, saltwater) in wet lab
- Acid-use-only sink (fume hood install in future)
- Freezer and deep freeze
- Entertainment rack system in dry lab (AV receiver, DVD player, speakers)
- Uni-strut tie-down system
- LCI-90 readout (payout speed and distance)



- Trawl winch remote controller
- Closed circuit TV with controller (4 cameras)
- UPS power, 120V clean power

Dive Amenities

- Bauer 200 B-Trox nitrox membrane dive compressor (12 cfm) with 4-bottle cascade storage
- Nitrox fill panel with O2 analyzer and 4 fill whips
- Dive master station and extra tank racks
- (2) 6-person dive benches with tank holders, folding tables, hanging racks
- (2) 6'x8' dive platforms with 6' dive ladders
- Freshwater rinse showers on transom and main deck
- Emergency oxygen and regulator
- Hyperlite recompression chamber

Network and Computers

- Cat 5 network drops throughout vessel, R232 drops in select locations (not wired)
- Dell laptop computer

Bridge Electronics

- Furuno Navnet Plotters (Gulf of Mexico electronic charts)
- Furuno radars and AIS
- (5) Steering stands--center console, port and starboard bridge, starboard bridge wing, aft control station
- Furuno autopilot
- (2) ICOM VHF marine-band ship radios
- (3) Hand-held VHF radios
- Iridium 9505 satellite phone
- Intercom system with 10 stations, talk-back capable loudhailers (exterior)
- Internal phone system
- Closed circuit TV (4 cameras)



Engine Machinery

- Northern Lights Generators, 65kw
- Caterpillar C32 Acert Main Engines, 3200 hp available
- Propelled by Hamilton H571 Waterjets

Tank Capacity

- Water storage of 500 gallons
- Water maker up to 800 gallons per day
- MSD Type II sewage treatment system (Headhunter) with 400 gallons storage
- Food storage for 5 days

Living Spaces

- Sleeping quarters (lockers & hooks in all rooms)
 - Main Deck: one 4-person and two 2-person rooms
 - Below Deck: two 3-person rooms
- Two interior heads with showers
- One outside head and separate shower
- Mess seats 14 people with LCD TV backdrop
- Galley with stove, microwave, refrigerator, freezer, ice maker, and trash compactor
- Gear storage on main deck under dive benches, in labs, and outside of bridge

Additional information about R/V MANTA is available at <http://flowergarden.noaa.gov/about/rvmanta.html>

