

GC50S

DESIGN BRIEF

This Service Vessel is conceived as a heavy duty composite catamaran for ocean service transporting technicians and light cargo to offshore windfarms while providing all necessary amenities for the technicians. It offers excellent fuel efficiency on a proven hull built with advanced composite construction methods and materials. A comfortable and functional interior with a safe and functional exterior were key design themes for the vessel. The versatile interior and exterior arrangement can suit a wide range of uses and alternative fit-outs.

The passenger cabin is climate controlled, providing many amenities with a complete TV/entertainment system, galley, a settee, seating for 9 additional passengers, and a desktop. Near the entrance in the passenger cabin is a workbench area, a head compartment, a shower compartment, and an open coatroom for wet work gear. Also at the main entrance are 3 large lockers for deck gear, safety equipment, work gear, and/or additional spare parts. Stepping up from the passenger cabin is a raised pilothouse with a 360° view through fwd, side, aft, and roof windows. The helm comfortably seats 2 crew members with a large display/control area and quick access to the deck via a side door.

Decks are well lit providing a safe working deck with perimeter and step rails. A mast mounted searchlight and thermal night vision camera make night operations as safe and stress-free as possible. With a hydraulic lifting boom aft and a HIAB crane fwd, loading cargo onto the large open fore and aft decks is quick and easy.

The base model covers the vessel as drawn and specified below. All equipment not detailed is to be standard commercial equipment to suit the operator. The vessel will suit various other machinery and equipment options as desired.

SPECIFICATIONS



LOA	51'-3"
BOA	20'-7"
DRAFT	4'-2"
LIGHTSHIP WEIGHT	36,000 lbs
PASSENGERS	15 Technicians
CREW	Captain and 1 crew
ENGINES	2 x Volvo D13MH 600hp
TOP SPEED	28knots
CRUISE SPEED	24knots 280nm @ 24knots, 1500nm @ 15knots
TANKAGE	2x 300gal. fuel, 200gal. water, 100gal. waste
STEERING	Hydraulic
AC ELEC	Shore power and Generator to suit
HVAC	3 Tons
ELECTRONICS	TBD

FEATURES

HULLS AND SUPERSTRUCTURE

Construction

- Hulls, decks, roof and cabin built of Corecell foam, glass and CPD epoxy resin using resin infusion and vacuum-bag. All primary structural components and amenities built using West System construction methods.

Interior/Exterior Finish

- Dupont polyurethane paint over Dupont epoxy primer--commercial yacht finish
- Tuflex rubber flooring interior
- Aluminum tread plate deck protection exterior

Paint & Graphics

- Gloss white hulls and superstructure
- Orange belt stripes
- 2 - Coats of Micron 66 bottom paint – Blue
- Other graphics as needed

DECK FITTINGS AND EQUIPMENT

Cleats

- 4 - 15"x12" S.S. bollards
- 2 - 15" S.S. horn cleats
- 6 - 18" S.S. rub strakes

Rails/Ladders

- 2 - 1.5" aluminum side & foredeck rails
- 2 - 1.5" aluminum rescue area rails
- 2 - 1.5" aluminum aft side deck rails
- 1 - 1.5" aluminum stern deck rail
- 2 - 1.5" aluminum bow handrails
- 2 - 1.5" aluminum interior ceiling handrails
- 2 - 1.5" aluminum interior steps handrails
- 2 - 1.5" aluminum ladders to cabin roof
- 2 - 1.5" aluminum ladders to pilothouse roof
- 3 - 1" Stainless Steel safety handrails

Deck Hatches

- 8 - Bomar aluminum access hatches
- 2 - Custom composite engine removal hatches

Windows/Doors

- 21 - 3/8" tempered glass American Marine windows, 2 of which open
- 2 - American Marine locking doors w/ windows
- 2 - Teak Isle interior doors
- 2 - rescue area doors in topsides

Steering and Rudders

- Hydraulic pump
- 2- Hydraulic rams in series
- 2 - Bronze tiller arms
- 2 - Bronze rudders on 316 Stainless Steel rod
- 4 - UHMW rudder bearings

Deck Cranes

- HIAB 026 T-2 crane
- 1 Ton swinging, lifting boom with captive hydraulic winch
- 20 – folding tie-down paints on fore and aft deck

GROUND/MOORING TACKLE/FENDERS

- 1 - FX 55 Fortress anchor, 15'-3/8" chain and 200'-3/4" rode
- 4 - 50'-3/4" dock lines
- 4 - Polyform fenders
- Full length commercial duty rub rail port and starboard with verticals
- Full beam commercial duty rub rail across stern with corner verticals
- Full beam commercial duty fender across bow

ELECTRICAL

120V AC

- 13 KW Onan Generator
- Inverter/battery charger
- AC/DC Master panel with AC source selector
- Shore power connection
- 8 - 120V interior outlets
- 6 - Flood lights
- 5 – Exterior deck lights
- 3 Tons - HVAC
- TV/Entertainment system

12V DC

- 2 - 8D house bank battery system
- 2 - 8D engine starting batteries
- 1 – 4D generator starting battery
- 2 - Dynaplate ground plates
- 1 - Port and starboard bow light, sternlight, steaming and anchor lights
- 1 - 600,000cp remote search light
- 9 - Fluorescent lights for bathroom and hull compartments
- 1 – LED exterior light for shower

- 3 – LED wall mounted work lights
- 11 - LED ceiling lights
- 2 - Red/ White LED lights at helm
- 4 - LED Courtesy lights
- 4 - 12V outlet
- 4 - Extraction fans in engine rooms, head, and shower

Navigation and Communication System

- 2 - VHF radios
- PA system
- GPS, Chart Plotter
- 14kW 4' open radar
- 4kW 2' radar dome
- Thermal night vision camera
- Depth sounder
- AIS –Class A
- Horn
- Sirius satellite marine weather receiver
- 4 – CCTV day/night video camera
- 2 – 14" multifunction navigation displays
- 1 - 4 ½" Hi Speed Compass

PLUMBING

Bilge

- Emergency manual bilge pump
- 6 – Electric automatic bilge pumps
- 2 - High water bilge alarm systems

Fresh Water System

- 200 gal. integral composite tanks
- Deck fill fitting
- Pressure water system
- 20gal. water heater, heat exchange/120V
- 3 - Sink fixtures
- 1 - Shower fixture
- 2 - Deck spigot

Black Water System

- 100 gal. integral composite tanks
- Deck pump out fitting
- Overboard discharge system
- 2 - 12V marine toilet

ENGINE

2 – D13MH 600 hp Volvo diesels with straight drive transmissions, 4 bladed fixed bronze props, 2 1/4" Aquamet 22 shaft, PYI shaft seals. Electronic engine, Vernetone wet exhaust, (2) 300 gal.

aluminum fuel tanks with fuel filters and emergency shut offs. Copper fuel lines. Elec fuel sender and gauges. Instrument panel w/ oil pressure, water temp, alarms, tachometers and engine hour meters. Fixed FE-241 fire suppression system. Soundproofing.

ACCOMMODATIONS

Passenger Cabin

- Aft access door
- Custom cabinets throughout
- 2 – 3 person cushioned bench seats with hardwood table in settee setup
- 9 - Cushioned, reclining, "aircraft" style seating with generous legroom
- Hardwood desktop
- Entertainment cabinet with TV and systems to suit
- Bench with sink, mini-fridge, coffee machine, microwave and cupboards
- Timber fiddles on bench, table, and desk tops
- Large coatroom with hanger rod
- Separate hot/cold shower with ventilation
- Head compartment with sink and ventilation
- Work area with work bench and storage space for tools and parts
- Large interior locker for safety equipment, spare parts or other gear
- 6 - 120V outlets
- 2 – 12V outlets
- Steps up to pilothouse
- Easy wash painted interior
- Commercial rubber flooring

Pilothouse

- Port exterior door with window
- Raised pilothouse
- Steps down into passenger cabin
- Windows: 2 – fwd, 2 – fwd roof, 2 – opening side, 1 – stb side, 2 - aft
- Primary and secondary engine controls
- 2 - 120V outlets
- 2 – 12V outlets
- Helm station with dual helm displays and small desktop
- Equipment and controls to suit
- 2 – Cushioned, adjustable helm seats

VESSEL SAFETY EQUIPMENT/FEATURES

- Three watertight bulkheads per hull (8 floodable compartments)
- 3 - 24" Ring buoy (orange) w/ bracket
- 20 - Adult Type 1 PFDs
- 6 - Red hand-held flares
- 6 - Orange smoke hand-held flares
- 2 - MOB recovery doors port/stb
- lifting boom on stb side
- 3 - 10 lb ABC (B II) Fire Extinguisher w/ holder
- Watertight container (flares, flashlight & whistle)
- Self-righting 25man Viking liferaft
- EPIRB
- PA system
- 1 - 600,000cp remote search light
- Thermal night vision camera
- 4 – CCTV day/night video camera
- Exterior floodlight
- First aid cabinet
- Reference handbook