

**CHEOY LEE
SHIPYARDS**

STANDARD SPECIFICATION



Specifications^(A)

SERENITY 83'

by
Cheoy Lee Shipyards

Length Overall	83' 3"	25.37 m
Length Waterline	76' 7"	23.34 m
Beam	21' 9"	6.63 m
Draft	6' 3"	1.91 m
Displacement (full load – est.)	180,000 lbs	81,600 kg
Fuel ^(B)	4,000 USG	15,140 ltr
Water ^(B)	800 USG	3,030 ltr
Holding Tank ^(B)	250 USG	946 ltr
Gray Water Tank ^(B)	250 USG	946 ltr
Engines	Twin CATERPILLAR C12 (660 bhp each)	
Generators	Twin KOHLER 32kW, 60Hz	
Design	Michael Burvenich	

STANDARD EQUIPMENT

Construction

- Molded single skin fiberglass hull

- Molded fiberglass decks, DIVINYCELL or equivalent core
- Integral fiberglass fuel, waste water and fresh water tanks with baffles and cleaning manholes
- Fiberglass rub rails with stainless steel capping
- Tinted (except pilothouse) tempered glass windows, installed utilizing high strength adhesive window system
- ALEXSEAL painted non-skid exterior decks except where specified
- ALEXSEAL exterior finish (Off White with Navy Blue trim)
- Vinylester hull laminates and epoxy barrier system applied to hull bottom, with five-year structural and anti-osmosis warranty
- Two coats of antifoul bottom paint
- Germanischer Lloyd approved structural design

Deck

- Hardware chrome on brass, 316 stainless steel or anodized/painted aluminum
- Twin vertical anchor windlass MAXWELL VWC4000 (hydraulic) with 1/2" chain gypsy, chain stopper and hawse pipe. Top mounted rope capstan
- Two 180 lb. galvanized steel high holding power anchors with hawse pipes and stainless steel chafing plates
- Two 45 fathom lengths of 1/2" galvanized anchor chain
- Watertight deck hatch to chain locker
- Stainless steel bollards (6)
- Stainless steel bow rails, 1.25", incorporating fender storage racks for four fenders
- Stainless steel burgee flag staff on bow rail
- Fiberglass bulwarks
- Walk around side decks with overhead lighting
- Scuppers draining to boot top
- Two deck lockers in Portuguese bridge forward of pilothouse
- Navigation lights
- Boarding gates (4), port and starboard with aluminum step plates
- Fresh water hose bib inside bow locker
- Flag staff

Electric Systems

- 220/110vAC, 60 cycle and 24/12vDC electric panels, main panels in engine room with sub-panels throughout vessel
- ACR 100 halogen 24vDC searchlight with dual station controls
- LED lighting throughout for interior, exterior, rope, cabinet, navigation, step and engine room lights
- Overhead light fixtures throughout with dimmers in specified areas.
- Valance lights and floor rope lighting with control switches
- Wardrobe lights, automatic
- Emergency lights, automatic at loss of primary lighting system, operating from an independent DC power supply. Removable emergency flashlights in each stateroom

- GLENDINNING Cablemaster 24vDC cable retrieval system for 230vAC 100 amp shore power system with 100 ft. cable
- Isolation transformer, (25 KVA), for shore power system
- Shore telephone and cable TV inlet each with 100 ft. cables
- 110vAC receptacles in galley, heads and exterior protected with GFI breakers
- Two 24vDC 210 amp-hour battery banks for engine starting and ship service
- Emergency engine start battery parallel system, dual station
- Two 12vDC 175 amp-hour battery banks for generator starting
- 12vDC 20 amp battery charger
- One 24vDC 210 amp-hour gel battery bank, with 24vDC 60 amp battery charger and 50 amp VANNER 12vDC power supply, with 12 spare 24/12vDC circuit breakers in sub-panel for electronic use
- 220vAC reverse cycle direct expansion air conditioning (except engine room)
- Copper bonding system, connecting all through hull fittings and major metal components to exterior hull zinc anodes
- Dynaplate electronic grounding plate and strap to pilothouse and flybridge ground terminal boards
- Voltmeters and ammeters for supply circuits
- Generating set / shore power selector switches and shore power polarity indicator
- LCD touch screen control/alarm monitoring system with audible and visual signals displayed on Programmable Logic Controller (PLC) located in pilothouse for generator low oil pressure, generator high temperature, high bilge level, and smoke detectors (engine room, staterooms, galley, salon). Security alarm sensors on all doors and hatches. Navigation light control and monitoring

Engine Room / Mechanical Systems

- Twin CATERPILLAR C12 (660 bhp each) diesel engines, fresh water cooled, 24vDC 75 amp alternators and 24vDC starting. ZF360 2.9:1 reduction gearboxes each with hydraulic power take off
- Local mounted main engine start/stop instrument panels for main engines and generators
- NAIAD stabilizer system with 12 sq. ft. fins
- NAIAD 12", 38hp hydraulic bow thruster
- CENTEK engine mufflers with hull side exhausts
- Two KOHLER 32kW generators with sound enclosures
- CENTEK combo generator mufflers, air/water separator type, with hull side exhaust
- Engineered engine room ventilation system with intake blowers taking air in via air/water separator filters on hull side
- Fire protection for engine room spaces, consisting of manually and automatically initiated FM200 fire extinguisher system. Upon actuation system shuts down blowers, shuts hull side ventilation dampers and audio/visual alarms sound
- JABSCO emergency engine driven bilge pump system for engine room
- REVERSO lube oil change system with manifold and hoses to main engines, gearboxes and generators

- RACOR filters on fuel supply line, two per main engines and one each for generator. Main engine filters with manifold to allow filter change underway
- Two 30 gallon water heaters, dual element, quick recovery type
- HEADHUNTER Mach 5 AC water pump with accumulator tank, for water pressure system
- Cartridge style whole system water filter unit
- Fuel management system, consisting of fuel shut-off valves, fuel transfer pump with flow meter and selector manifold
- HART Tank Tender gauges for fuel, fresh water, black water and grey water tanks, pneumatic pump type
- Black water tank level indicator/high level alarm
- Black water system with Y-valve selector to allow discharge into holding tank or direct overboard. Macerator pump for holding tank pump out direct overboard or to deck fitting for disposal shore side
- Sea chest with bonded valves for sea water supply
- GROCO bronze raw water strainers for all engine and sea water pump intakes
- Seacocks on all through hull fittings below the water line
- Fiberglass battery boxes
- Battery condition indicator
- Engineered sound vibration and noise abatement system for engine room spaces consisting of lead tile sound barriers and mylar faced synthetic lead-foam insulation, covered by white painted aluminum perforated sheeting. Custom sound mounts for engines, generators, engine room stanchions, head pumps/motors, airconditioning compressors and sea water cooling pumps
- Drip trays under engines
- Stainless steel propeller shafts
- Stainless steel rudder blades
- Nibral shaft struts
- Nibral propellers, dynamically balanced
- PYI packless shaft seals
- DURAMAX cutlass rubber stern and rudder bearings
- Automatic sump pumps
- Automatic bilge pumps, for each separate compartment in the vessel
- Guard rails for engines
- Work bench with sink and fresh water hose bib
- Engine room access from crew passageway
- Escape hatch from engine room to master stateroom head
- 110vAC outlets (2), GFI type
- Smoke detector
- Overhead lights
- Preparation for watermaker, including mounting platform, plumbing and power supply

Flybridge

- MATHERS MC2000-2 electronic engine controls
- TELEFLEX/HYNAUTIC hydraulic power steering system

- Engine instrumentation and alarms
- Windless and thruster controls
- Remote control for searchlight
- Fiberglass instrument and electronics console
- Four moulded cup holders and two storage pockets
- 28" stainless steel steering wheel
- Stainless steel handrail around acrylic windscreen
- STIDD helmsman's seat with vinyl cover
- L-shape fiberglass lounge seat with painted fiberglass table with magazine rack under
- GRP hard top with down lights including two red lights on separate circuit
- NAUTICAL STRUCTURES 1,700 lb. davit with standpipe and power rotation
- Stairs to main deck aft, with stainless steel guard rail, gate and hatch
- Stainless steel rail on aft flybridge deck sides
- Lightning arrester system
- Painted fiberglass bar cabinet with sink, hot and cold water faucet and U-LINE MODEL 29 combo refrigerator/icemaker with barbecue grill
- 110vAC outlets (2), GFI type
- BUELL twin trumpet air horn
- Scuppers and drainage system to lower decks
- Painted non-skid deck
- ACR 100 quarts halogen searchlight, remote dual station control

Pilothouse

- MATHERS MC2000-2 electronic engine controls
- TELEFLEX/HYNAUTIC hydraulic power steering system
- Instrument and electronic console
- Engine instrumentation and alarms
- MAXWELL Auto-Anchor 560 control for anchor windlass
- Remote control for searchlight
- 28" stainless steel steering wheel
- Fixed windows forward, clear glazing
- Electric windshield wipers, long arm pantograph units (3)
- Fresh water wash system for wipers
- STIDD helmsman's seat with vinyl cover
- Programmable Logic Control Panel (see Electrical System)
- Smoke detector
- Ceiling lights red color for night running
- L-shaped seating with storage under and pedestal mounted table with wood top
- Weather tight pantograph doors to side decks
- 110vAC duplex outlets (3)
- Telephone jack

Salon

- Bar with stone^(C) countertop, cabinet with sink, cold water faucet U-LINE MODEL 75 combo refrigerator/icemaker unit and liquor storage. Bar stools are optional extra
- Telephone jack
- Smoke detector
- Entertainment cabinet, no units
- Ceiling lights with control/dimmer switch
- Valance lights and floor lighting
- Sofa and cocktail table
- 110VAC power supply to both ends of salon sofa for optional table lamps
- Wooden dining table
- Dining buffet unit
- Fixed adhesion style tinted tempered windows
- Stainless steel framed, tinted tempered glass sliding door to aft deck
- 110vAC duplex outlets (5), one GFI type for bar

Deck Head

- HEADHUNTER electric head (fresh water flush)
- Faucet and bath accessories
- Stone^(C) countertop with wash basin
- 110vAC duplex outlet (1), GFI type
- Exhaust blower
- Mirror

Galley

- Stainless steel electric range/oven
- Stainless steel microwave oven with vent hood over stove
- Stainless steel 24 cubic foot refrigerator/freezer, with icemaker
- Stainless steel dishwasher
- Stainless steel double sink
- Single lever faucet with pull out spray faucet
- Garbage disposal
- Cabinets upper and lower
- Stone^(C) countertop
- Ceiling lights
- Under cabinet lights
- 110vAC outlets (4), GFI type
- Smoke detector
- Telephone jack

VIP Stateroom and Head

- Queen berth, with storage drawers under, convertible to two twin berths
- Two night tables
- Telephone jack
- Smoke detector
- Wardrobes, with cedar lining on back surface and mirror (1) on door

- Two reading lights
- Drawers and storage cabinets
- Vanity with chair
- Ceiling lights with control/dimmer switches
- Valence lights and floor lights around berth
- Stainless steel framed opening ports with screens and hold open arms
- HEADHUNTER 24vDC electric head (fresh water flush)
- Stall shower
- Faucets and bath accessories
- Stone^(C) countertop with sink
- Mirrored medicine cabinet
- Exhaust blower
- 110vAC duplex outlets (3) in stateroom, one GFI in head

Master Stateroom and Head

- King berth, with storage drawers under
- Over berth soffit with indirect lighting on dimmer control
- Two night tables
- Vanity with chair
- Settee
- Chest of drawers and storage cabinet
- Telephone jack
- Smoke detector
- Wardrobe, with cedar lining on back surface and mirror on door
- Walk-in closet, cedar lined on back surface
- Two reading lights
- Ceiling lights with control/dimmer switches
- Valence lights and floor lights around berth
- Stainless steel framed opening ports with screens and hold open arms
- HEADHUNTER 24vDC electric head (fresh water flush)
- Jacuzzi style tub
- Stall shower with glass door
- Faucets and bath accessories
- Stone^(C) countertop with two sinks
- Mirrored medicine cabinet
- Exhaust blower
- 110vAC duplex outlets (3) in stateroom, one GFI in head

Forward Stateroom and Head

- Queen berth, with storage drawers under
- Chest of drawers and storage cabinets
- Telephone jack
- Smoke detector
- Wardrobe, with cedar lining on back surface and mirror on door
- Two reading lights

- Ceiling lights with control/dimmer switches
- Valence lights and floor lights around berth
- Stainless steel framed opening ports with screens and hold open arms
- Stainless steel framed tinted tempered glass ventilation/escape hatch with Oceanair Skyscreen
- HEADHUNTER 24vDC electric head, fresh water flush
- Stall shower
- Faucets and bath accessories
- Stone^(C) countertop with sink
- Mirrored medicine cabinet
- Exhaust blower
- 110vAC duplex outlets (2) in stateroom, one GFI in head

Lower Guest Foyer

- Staircase from pilothouse
- Stewardess locker with 27" MAYTAG washer and dryer
- Lockers and shelves

Crew Stateroom and Head

- Single berth with storage under
- Reading light
- Telephone jack
- Wardrobe, cedar lining on back surface
- Ceiling lights
- Smoke detector
- Stainless steel opening port with screen and hold open arm
- HEADHUNTER 24vDC electric head (fresh water flush)
- Stall shower
- Faucets and bath accessories
- CORIAN countertop with sink
- Mirrored medicine cabinet
- Exhaust blower
- 110vAC duplex outlet (1) in stateroom, one GFI in head

Captain's Stateroom and Head

- Double berth with storage under
- Berth reading lights
- Telephone jack
- Wardrobe, cedar lining on back surface
- Ceiling lights
- Smoke detector
- Stainless steel opening ports with screens and hold open arm
- HEADHUNTER 24vDC electric head (fresh water flush)
- Stall shower
- Faucets and bath accessories
- CORIAN countertop with sink

- Mirrored medicine cabinet
- Exhaust blower
- 110vAC duplex outlet (1) in stateroom, one GFI in head

Lazerette

- AMTICO flooring
- Ceiling lights
- 110vAC duplex outlets (2)
- Smoke detector
- Watertight door to swim platform

Aft Deck

- Teak planked deck surface
- Painted fiberglass settee with upholstered cushions and painted fiberglass table
- Molded fiberglass stairs to flybridge
- Overhead lights
- Stairs to crew area and swim platform
- 110vAC outlet (1), GFI type
- Storage cabinet with stainless steel sink, hot and cold water faucet and U-LINE model 29 icemaker/refrigerator unit
- Wing doors to side decks

Transom Swim Platform

- Teak planked swim deck surface
- Stainless steel swim ladder with storage bracket
- Fresh water telephone type shower, hot and cold
- Watertight door to lazerette and crew quarters
- Locker for shore services, shore power, television and telephone inlets

Owner's Documentation

- Vessel supplied with list of major equipment, serial numbers and manufacturers' contact details. Manufacturer equipment manuals will be supplied as available. Drawings for major systems, safety and docking plans are supplied on CD

Optional Equipment

- Watermaker
- Navigational electronics
- Remote plug-in stations for electronic engine controls
- RITCHIE 5" compass with light and dimmer
- Audio/Visual systems
- Telephone/intercom system
- Trash compactor
- Dinghy, chocks and backing plates in deck
- Life raft and chocks
- Additional teak deck overlay

- Soft goods decor, such as drapes, carpet, window treatments, berth treatments (see décor specifications)
- Loose furniture, chairs and stools
- 24vDC back-up fresh water pump
- Lube oil storage and waste oil tanks
- Salt water wash down on foredeck
- Full raised pilothouse with sky lounge
- Inverter system
- Euro-transom with twin stairs to swim platform, including larger crew staterooms

NOTES TO SPECIFICATIONS

- (A) Right is reserved to make changes at any time, without notice, in prices, materials, specifications and equipment. Drawings show optional items. Where these specifications differ from drawings, specifications take precedence.
- (B) Capacities of tanks are estimated to be total capacity of all constituent tanks $\pm 5\%$. Usable capacities will vary depending upon conditions.
- (C) References to stone include a choice of CORIAN or AVONITE. Colours from builder's standard selection.