



Global 45m Project by Cheoy Lee Shipyards

This 45m tri-deck Global Motoryacht by Cheoy Lee, described by these specifications, is a world-class, semi-displacement design with a luxurious interior. The yacht is designed for an Owner's party of twelve to fourteen, based on interior layout, in six or seven staterooms for Owner and guests and a large panoramic skylounge and flybridge. The full-beam master is located forward on the main deck (or skylounge level) and the guest staterooms are located below the main deck. The yacht is designed for a crew of ten with a captain's cabin either aft of the pilothouse or on the main deck, depending on Owner's choice of layout. There are four crew staterooms forward sleeping a total of six with an engineer's stateroom for two aft. Depending on design, the yacht can have a large lazarette/tender garage. This yacht has an elegant cherry or mahogany veneered interior throughout the Owner's and guest areas.

45m Tri-Deck Motoryacht by Cheoy Lee Shipyards Built to Lloyd's and MCA

Length	45m
Beam	28'0"
Draft	7'2"
Engines	Caterpillar 3512c @ 1650hp
Maximum Speed	TBD
Cruise Speed	TBD
Generators	(2) 99kW + (1) 55kW
Bow Thruster	90hp
Stabilizers	1.7 sq m fins
Fresh Water Capacity	3,200 gallons
Fuel Capacity	12,500 gallons
Sewage Tank Capacity	300 gallons
Gray Water Tank Capacity	2,400 gallons
Height	~50'0"
Displacement	210 L.T. approximately @ half-load
Cruising Range	5000 nm @ 10 knots

Brief Specifications

- Hull, deck, interior decks, structural bulkheads and superstructure of AIREX, DIVINYCELL or equivalent cored fiberglass
- Multi-axial E-glass reinforcement
- Integral fiberglass fuel, fresh water and holding tanks, with baffles and cleaning manholes
- Fiberglass rub rail with stainless steel capping
- Tinted (except pilothouse), tempered, glass (8/10mm) windows, utilizing frameless adhesion window system

Classed to Lloyd's and MCA

GENERAL:

ACCOMMODATIONS:

Owner's Party: Twelve to Fourteen depending on layout chosen including Master Suite and five or six guest staterooms. Owner's party also has seven bathrooms (including two in the Master Suite) with three having Jacuzzi tubs.

Crew: Captain and nine crew members including one Captain's cabin aft of the pilothouse (or on main deck depending on final layout approval), two double cabins forward, two single cabins forward and an engineer's double cabin. All crew spaces feature separate bathrooms and separate showers totaling six.

REGISTRY: Cayman Islands Ship's Registry

TONNAGE: Under five-hundred gross tons

CLASSIFICATION: Lloyd's and MCA certificate by Cayman Island authorities

NAVAL ARCHITECT: M.G. Burvenich, Inc.

INTERIOR DESIGNER: Sylvia Bolton Design, Inc.

MAJOR EQUIPMENT & MACHINERY:

Propulsion System: Twin-screw geared diesel with fixed-pitch propellers

- 1.1 PROPELLERS/SHAFTING: Two fixed-pitch NiBrAl, 48" 5-blade propellers, on Aquamet 22 propeller shafts or equal with dripless-type shaft seals and cutlass bearings.
- 1.2 MAIN ENGINES: Caterpillar 3512C @ 1650hp (2)
- 1.3 REDUCTION GEARS: Two ZF marine reverse-reduction gears with approximately 3.0:1 ratio with torsion couplings.
- 1.4 ELECTRICAL GENERATION: (2) 99kW + (1) 55kW ship service diesel generators, 208/120 V AC, 60Hz, 3-phase, heat exchanger cooled, electric start, non-

parallel, wet exhaust. Generators will have hard sound enclosures.

- 1.5 BOW THRUSTER: One 90hp hydraulic run off Live C-Pads (2) on gearboxes, and one generator mounted PTO.
- 1.6 STERN THRUSTER: One 75hp hydraulic run off Live C-Pads (2) on gearboxes, and one generator mounted PTO.

AUXILIARY MACHINERY & SYSTEMS

Piping System: All systems to be designed and built to Cheoy Lee Shipyards standards

- 2.1 ENGINE EXHAUST: Propulsion engines shall have wet exhaust systems exiting through bottom of hull with a bypass through the transom. Mufflers will be placed on exhaust piping exiting the transom.

Generator sets to have "water drop" style mufflers with exhaust gas exiting at hull side waterline and exhaust water below the vessel's waterline.
- 2.2 BILGE/FIRE/BALLAST: Manifold type system with electric-driven pumps. Fire main piping to be CuNi per rules. Two 5hp pumps and one 1.5hp pump. Two Jabsco bilge stripping pumps shall also be provided for engine room and lazarette compartments.
- 2.3 FIXED FIRE FIGHTING: FM200 (or equal) flooding system for main engine room and tender garage (if applicable). A fire suppression system shall be provided for the galley hood.
- 2.4 FUEL OIL TRANSFER: Header type system with remote controls. The primary transfer pump shall be 1.5hp pump and the back-up electric transfer pump shall be 1/3hp and one manual hand pump for priming engines. Four tanks and one day tank with tank level monitoring system. A fuel filter/water separator shall be provided in the transfer system to pre-filter the fuel going into the day tank.
- 2.5 FUEL OIL SERVICE: Main engine and generators supplied from a fuel oil day tank. Piping system to be configured to allow manual priming of the fuel filters. Racor filters to be provided at each engine.

Alfa Laval model 103B fuel oil centrifuge supplied and installed.
- 2.6 LUBE OIL SYSTEM: Lube oil clean and dirty oil storage tanks shall be provided. A clean oil and separate dirty oil transfer system shall be provided utilizing two separate 3/4hp transfer pump (Oberdorffer or equivalent).
- 2.7 POTABLE WATER SYSTEM: Two Headhunter pressure sets and two 80-gallon water heaters

supplying fixtures. Piping to be copper tubing. System shall include two hot water loops. Water filters and UV sterilization to be provided.

- 2.8 SEA WATER COOLING: Two main FRP sea chests, with a crossover, shall provide seawater supply for main engine and generator cooling, auxiliary systems and watermaker. Piping to be bronze or copper-nickel, with suitable rubber hose connections.
- 2.9 COMPRESSED AIR: Two 3hp air compressors and one 46-gallon air receiver for ship's service air supply.
- 2.10 SANITARY SYSTEM: Freshwater sewage flushing system with Headhunter toilets and sewage holding tanks. A suitable discharge pump to deck or overboard shall be provided. Headhunter or Hamman sewage treatment plant will be provided. Gray water to drain either directly overboard or to grey water holding tank(s).

OTHER AUXILIARY SYSTEMS:

- 3.1 STABILIZERS: Active fin, NAIAD stabilizers with 1.7 sq m fins with 3-roll axis. Control shall be installed and run off central hydraulic system. OPTION: Zero speed stabilization ("At Anchor")
- 3.2 STEERING: Kobelt hydraulic , with full follow-up wheel control in Pilothouse, jog levers at wing stations, and emergency steering station in lazarette.
- 3.3 ENGINE CONTROLS: Electronic ZF/Mathers controls furnished with engine main control station in pilothouse, and wing stations port and starboard in the pilothouse.
- 3.4 ENGINEROOM VENTILATION: Forced intake, forced exhaust, with variable-speed fans and Delta-T demisters on intake. Automatic fans.
- 3.5 WATERMAKER: Two 2500 gallon per day reverse osmosis water makers.
- 3.6 HVAC SYSTEM: 36 ton Marine Air seawater cooled chilled-water type air conditioning system with individual air handler units. Reverse cycle heating with supplemental strip heating. Chilled water piping to be copper tubing. Two seawater cooling pumps with one serving as a backup. 400 cfm of fresh air make-up shall be installed. Two 16,000 BTU units in engine room. All heads to have exhaust system. OPTION: Four 16,000 BTU air handlers and vents on main deck.
- 3.7 CENTRAL HYDRAULIC: A NAIAD central hydraulic system shall be provided driven off PTO off gearboxes (2) and 99kW generator (1) with a 15hp electric motor for dockside use and back-up. System shall service the bow thruster, anchor windlass, capstans, tender

garage door (if applicable), stabilizer and davit. Piping to be suitable pipe and rubber hose with isolation mounts.

ELECTRICAL:

System shall be designed to meet Lloyd's rules.

- 4.1 ELECTRICAL SYSTEM, AC: 208/120 VAC, 60 Hz, 3-phase primary system.
- 4.2 MAIN SWITCHBOARD: One Marine-type, configured for non-parallel operation of the two main generators or shore power. Switchboard shall be located in the engine room.
- 4.3 SHORE POWER: Two 100 amp shore power connections shall be provided. Two 100 foot shore power cords shall be provided. One 75 KVA Atlas shore power converter.
- 4.4 LIGHTING: An emergency lighting system, 24 V DC battery system shall be installed. Spaces to be lighted mainly with halogen lights. Every cabin to have the following lights:
- Ceiling lights to be controlled by switches by the door and night tables
 - Reading lights on the head of the bed to be controlled on the light
 - Ceiling lights in the bathrooms to be switches off/on from the door
 - Mirror lights in bathroom are controlled on wall
 - 24V emergency light
 - Bathroom plugs 1 10V/GFI variety
- Lounge Rooms shall have the following lights:
- Ceiling lights with controls at the exits
 - Ceiling lights in the dining room with controls at the entrance
 - 24 V emergency light
- Owner and guest light to be controlled by Lutron programmable system. Crew area lights shall be controlled by Lutron manual dimmer switches.
- 4.5 ELECTRICAL SYSTEM, DC: 12 VDC and 24 VDC as required for ship's service DC loads, emergency loads and for electronics.

OUTFITTING:

- 5.1 RUBRAILS: Cheoy Lee standard FRP extrusion painted white to match hull. Stainless steel caprail over extrusion.
- 5.2 CORROSION MONITORING: Suitable anodes shall be provided.
- 5.3 STEAMING POLE: A stainless steel steaming pole shall be mounted on the flybridge bow to meet the running light requirements.

- 5.4 DECK FITTINGS: Polished stainless steel.
- 5.5 HANDRAILS: Polished stainless steel.
- 5.6 ENGINE ROOM FLOOR: FRP diamond plate, white finish mounted on rubber strips.
- 5.7 BOAT HANDLING: Rescue boat and davit to MCA requirement.
- OPTION: One 3,000 lb overhead tender lift for launching tender from tender optional garage.
- 5.8 ANCHORING EQUIPMENT: Two Maxwell VWC 8000 capacity anchor windlasses. Two 397lb anchors with 900 feet of 17mm grade II chain. Anchor pockets with polished stainless steel plates.
- 5.9 CAPSTANS: Two Maxwell stern capstans, 3,500 lb capacity each.
- 5.10 ANCHOR WASH DOWN: Anchor wash down provided using the fresh water system with valve in the foredeck storage locker.
- 5.11 GANGWAY: One manual portable 9 step Marquipt; four sets of mounting brackets, two per side.
- 5.12 PASSARELLE: One 17.5 foot Marquipt, or equal, articulating hydraulic passarelle shall be installed per drawings, approved by Owner.
- 5.13 HOT TUB: Install a six person hot tub on the flybridge deck per plans.
- 5.14 UNDERWATER LIGHTS: OPTION: Install two underwater lights at the transom.
- 5.15 BATTERIES: Three Charles (or equal) battery chargers, 60 amp 24 volt; One Charles (or equal) battery charger, 40 amp 24 VDC. Two heavy duty batteries for each main engine and each generator starting for a total of eight batteries. Two 24VDC systems comprising two 8D batteries each for ship's electronics , alarms, & emergency lighting for a total of four batteries.
- 5.16 SHIP'S ALARM: An integrated ship's alarm & monitoring & control system shall be provided (I.S.I.S.). Fire and bilge alarms monitored in engineroom, crew mess, and pilothouse. Smoke and thermal detectors throughout yacht.
- 5.17 ELECTRONICS AND AUDIO/VISUAL EQUIPMENT: Allowance included for navigation, communication, audio/visual, TVs, stereo, video and computers.
- 5.18 LIFE SAVING EQUIPMENT: Two 25-man inflatable life rafts. Twenty adult life jackets, six children's life jackets and four ring buoys.
- 5.19 FIRE FIGHTING EQUIPMENT: Suitable portable extinguishers shall be provided.

- 5.20 WINDSHIELD WIPERS: Five Exalto units.
- 5.21 HORN AND BELL: Kahlenberg three trumpet model 312-T2 chrome-plated triplex horns; Perko (or similar) chrome-plated bell.
- 5.22 HELM CHAIR: One Stidd pilot chair in pilothouse.
- 5.23 WIND SCREEN: Tinted plexiglass wind screen with stainless rail on top running length of screen.
- 5.24 CAP RAIL: Painted FRP or varnished teak cap rails aft around transom on main deck and upper deck.
- 5.25 TEAK DECKS: Provided on aft main deck level, aft pilothouse deck, Portuguese deck, side deck (not including foredeck), and swim platform area as shown on rendering.
- 5.26 TENDERS/JET SKIS/TOYS: Owner furnished including cradles and slings; builder installed.

MISCELLANEOUS:

- 6.1 BOAT HOOK: Two 1.5" x 8' with chrome-plated hook.
- 6.2 FENDERS: Six 15" inflatable type with ½" nylon line.
- 6.3 COVERS: Sunbrella snap-on covers for flybridge seats, settee, tables, bow seat and aft deck seating.
- 6.4 CUSHIONS: Aft deck settee, bow sun pad, and flybridge seating.
- 6.5 SHORE ADAPTERS: Two Charles "Smart Y" 100.
- 6.6 SPARE PARTS: None. Optional extra.
- 6.7 FLAG POLE: Stern flag pole rigged with 1/8" nylon line, bow flare rigged with 1/8" nylon line, both rigged per standard yacht practice.
- 6.8 EPIRB: One EPIRB.
- 6.9 MOORING LINES: Four 1" by 60 foot braided dock lines.
- 6.10 TOWING LINE: One 90 foot 1 ¼" nylon double braid towing line. Line throwing appliance.
- 6.11 FIREMAN'S SUIT: Per MCA requirement.
- 6.12 FIRE BLANKET: One fire proof blanket located in the galley.
- 6.13 NAMEBOARDS/NAME: Allowance for name boards, painted name and home port.

INTERIOR OUTFITTING AND FURNITURE

GENERAL:

The level of workmanship, fit, finish, and details of the interior joinery package shall be similar to MY Marco Polo, Cheoy Lee hull #4874. The built-in woodwork and furniture as specified in Owner and Guest areas shall be in cherry or mahogany or other equally priced wood with finish as listed below:

- Owner's stateroom, lounges, main deck and dining: Owner/Interior Designer specified
- Guest areas below deck: Owner/Interior Designer specified
- Crew areas, balance of yacht: Owner/Interior Designer specified

The owner shall provide written approval of wood panels selecting color and finish within thirty days of contract signing.

All materials chosen by Owner/Interior Designer/Decorator shall meet MCA rules.

Cheoy Lee standard interior décor specification #20090101 applies.

INTERIOR AND JOINERY:

The interior shall be outfitted and complete as described herein.

Detailed items shall be as follows:

- 11.1 HEADLINER: Majilite headliners shall be installed in all Owner and Public spaces. Majilite Finesse (or equal) panels in other living areas. The overhead panels shall be installed in a brick pattern and installed to be readily removable for maintenance and service. Lazarette area overheads shall be TBD and laundry area shall be board panels. Materials TBD.
- 11.2 WOODWORK: The built-in woodwork and furniture as specified in Owner, Guest, Captain's quarters and pilothouse areas shall be per Owner/Interior Designer specifications. Crew areas as specified per Owner/Interior Designer specifications.
- 11.3 CEILINGS: Heights will vary in different parts of the yacht. Owner and Guest areas are intended to have 7'0" ceilings and Crew area to have a minimum of height of 6'5". Actual finished heights may vary based on structure and interior design details..
- 11.4 LIGHTING: The Owner and Guest areas shall be controlled using Lutron programmable system. Closet lights shall be fitted with magnetic switches on closet doors with inside lighting. Crew lighting will be done with the Lutron manual dimmer system.
- 11.5 HARDWARE & FITTINGS: Door hardware and door cabinet hardware to be Jado or equal throughout the accommodation spaces. Other hardware may be substituted and quoted to suit Owner/Interior Designer preference. Builder to provide and install sea keeping Latches on all doors and drawers in all areas.
- 11.6 PLUMBING & FIXTURES: Builder to supply Jado plumbing fixtures (or equal) in the accommodation spaces. Other hardware may be substituted and quoted to suit Owner/Interior Designer preference.
- 11.7 INTERIOR SPACE

OUTFITTING: Interior arrangements shall be shown in plans.

FIXED FURNITURE:

Built-in furniture (cabinets, cupboards, drawers, consoles, night tables, wash basin units, desks, dressing table, etc.) will be installed according to the plans.

Marble/granite shall be fitted on the top of the wash basin units of all Owner, Guest and day head bathrooms. Owner may specify Corian/Avonite/granite with the understanding that any overage from Builder allowance [see décor specification] will be borne by Owner.

The working surface of galley counters will be Corian/ Avonite/granite with the understanding that any overage from Builder allowance will be borne by Owner. Owner may also choose stainless steel for these working surfaces.

Furniture will be veneered with cherry or mahogany wood. Top of furniture in salons, dining and Owner's suite will be finished corresponding to the selected wood.

Dedicated storage with support for the following materials of Owner supply will be provided as follows:

- Glasses -- plexiglass supports for one table service for twelve people
- Dishes -- plexiglass supports for one table service for twelve people
- Cutlery -- drawers with partitions
- Silverware
- Compact discs (CDs) and digital video discs (DVDs)

PARTITIONS:

All full height interior partitions shall be cored fiberglass. Partitions to be sealed to deckheads, with insulating material to reduce sound transmission between compartments. Special attention will be given to bulkhead between galley and the Owner's stateroom and/or the Pilothouse and the Owner's stateroom in the Skylounge for noise treatment.

FLOORS:

Interior decks are cored fiberglass and made to accept acoustic underpadding and carpet, marble, or custom wood flooring. Main salon will be carpeted, with acoustic underpadding or other equivalent for sound reduction.

WINDOW TRIMS:

All side cabin window mullions, headers, and sills in Owner and Guest areas above the main deck shall be faced in wood veneer with openings finished with hardwood trim. Pilothouse window mullions and sills shall be finished with Majillite padded panels.

CLOSETS/LOCKERS:

All clothing and linen lockers shall be lined with aromatic cedar paneling. One fixed shelf and hanging rod is standard.

The bow locker will include the following features: hooks for line and fender storage, two lights with a common switch, a 110V/GFI receptacle, anchor windlass tool storage, provision for positive ventilation and painted metal shelves for cleaning supplies.

MISCELLANEOUS:

All mattresses shall be provided by the Builder or to Shipyard standard specification.

All mirrors including vanity mirrors shall be provided by Builder; however, decorative framed mirrors shall be provided by Owner as specified by Owner or Interior Decorator.

All shower doors and hardware shall be provided by Builder and per Shipyard standard specification. Owner/Interior Decorator upgrades can be considered as optional extras.

NOISE AND VIBRATION CONTROL:

Builder will use the services of Van Capellen or Silent Line to reduce noise levels on the yacht. The Builder will incorporate these recommendations plus its proven features to control noise and vibration on this yacht. The main features to reduce noise and vibration are as follows:

- Provide adequate scantlings and continuity of structure, particularly the foundation of main engines and gears
- Soft mount the main engines
- Double soft mount the generators
- Install reciprocating mechanical equipment on resilient mounts
- Install thermal insulation and sound dampening materials overhead in the engine room and on the forward and aft engine room bulkhead
- Structural stanchions shall be soft mounted on one end and filled with sand or rigid foam
- Exhausts shall be flexibly mounted if attached to overhead
- Install main piping with isolation supports in the engine room
- Install "water drops" for generator-see 2.1 exhaust system
- All piping shall be suitably mounted and isolated

A-weighted noise level readings in less than two foot seas and ten knots of wind to be taken with the target noise levels to be as follows:

	@ sea 12 kts (displacement spd)	@ anchor 1 generator on
Owner's cabin	58 db	52 db
Guest cabins, aft	65 db	54 db
Guest cabins, forward	63 db	54 db
Skylounge	58 db	52 db
Main deck salons-over engine room:	65 db	54 db
Forward of engine room	63 db	54 db
Crew cabins forward	60 db	52 db
Engineer's cabin aft	78 db	65 db
Wheelhouse	56 db	52 db

Note: Bathrooms are in all cases allowed to be 3 db louder than the compartments to which they are associated. Sound levels shall meet the above levels plus or minus 3 db (TBD).

INSULATION, ACOUSTICAL AND THERMAL:

All interior partitions and joiner bulkheads are part of the acoustic and thermal package and shall consist of cored FRP panels, with additional acoustic treatment.

All interior decks shall be cored FRP panels.

Additionally, carpet and tile acoustic underlayment shall be provided.

All sound insulation to be to Van Cappellen or Silent Line specifications.

Hull and House Sides:

Thermal and acoustic insulation in the hull sides, focsle, deckhouse, pilothouse and exterior overheads (with enclosed spaces above) is achieved by items selected by Van Cappellen or Silent Line. Insulation shall be installed over stabilizer spaces. The use of troweld on insulation material is acceptable.

Accommodation Areas:

All hull sides in accommodation areas as well as cabin sides and overhead where the outside is exposed to the weather, shall be insulated. Bulkheads between cabins shall be constructed of cored FRP material and Van Cappellen or Silent Line insulation specifications.

Engine Room:

Forward and aft engine room bulkheads, hull sides from deck to the floor plates and overhead shall be treated with sound dampening, thermal/acoustical material and structural fire protection in accordance with the Rules; Van Cappellen or Silent Line specifications, and sheathed with perforated or solid white aluminum.

No mechanical noise generation equipment will be attached directly to the forward engine room bulkhead that may cause unacceptable noise.

Ventilation Ducts:

Vent trunks from the engine room and galley passing through accommodations shall be insulated With material for acoustic insulation and structural fire protection.

Engine room ventilation trunks shall be insulated for structural fire protection in accordance with the Rule.

Galley Floor/Bulkhead:

Builder shall furnish and install extra sound dampening material in the bulkhead of the galley separating other spaces. Galley floor to be cored FRP with sound dampening material. Attention shall be paid to bulkhead treatment separating the other spaces and galley to prevent the transmission of odors and noise.

Captain's Quarters:

Builder shall furnish and install additional insulation and sound dampening material in the wall between the Skylounge and the Captain's Quarters and in the floor. Or between the pilothouse and the Skylounge master stateroom based on final layout approval by Owner.

MCA Partitions:

Certain partitions and doors may require special fire ratings or flame retardant construction as well as self-closing devices required for MCA compliance. Builder shall provide indicators and controls in accordance with regulatory requirements.

PAINTING:

The yacht will be painted with Awlgrip or Alexseal high gloss paint coatings. The hull exterior and super structure shall be faired for this process. The yacht shall be painted white, shade to be determined by Owner.

Name: The name shall be painted or decals on the stern in gold leaf. Name boards shall be provided on each side; an allowance of \$24,000 has been included for nameboards and

transom name and homeport.

Vinylester outer hull laminates and International epoxy barrier system applied to hull bottom, with five year structural and anti-osmosis warranty.

Two coats of anti-fouling bottom paint, Micron 66 black.

ALLOWANCES

1. **SOFT GOODS***: Décor allowance to include window treatments, bedspreads, throw pillows, flatware, dishes, crystal, linens, towels, and spares in coordination with interior decorator.
2. **ELECTRONICS***: See section 5.17
3. **AUDIO VISUAL***: See section 5.17
4. **TENDER/TOYS***: Owner Supply
5. **CANVAS PACKAGE***: Flybridge and aft deck cushions with Sunbrella covers are standard. Optional canvases to include seat covers and foredeck sun pad cover

Cheoy Lee Shipyards reserves the right to change specifications, options, and pricing without notice and/or substitute items due to availability. Option sheet shall not be valid unless signed by all parties and attached as part of a fully executed purchase agreement.

Owner Furnished and Installed Equipment Include, But Not Limited To:

- Decorative stainless steel, gold trims, gold leaf paintings, murals, statues, ornaments, special trims, etc.
- Art work, framed pictures and paintings, trompe l'oeuil paintings, sculptures, scale models and other personal items
- Custom china, stemware, crystal and silverware
- Utensils, pots, pans, and kitchen utensils
- Plants
- Library books
- Bedspreads, linens, sheets, pillows, almanacs, chart table equipment, etc.
- Computers
- General stores, cleaning equipment
- Spares, tool boxes, and tools (in the case of tools, except where supplied by the manufacturer or supplier of material and equipment)
- Gymnasium equipment
- Tenders, Jet skis, water toys and approved rescue tender with cradles and slings
- Diving bottles with scuba accessories and swimming equipment