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SUNSEEKER 40 M YACHT

Technical Specification

Boat Number	**52514131**
Sunseeker Dealer	**Sunseeker London**
Customer Name	**Confidential**
Area of Boating	**TBC**
Build to Standard Spec	**2013**
HIN No.	**GB-XSK05578G313**
Specification Issue.	**5**
General Arrangement Issue	**11**
Engine Option	**Twin MTU 12V 4000 M93 (2 x 3180PS) - Built to RINA Commercial & MCA Short Range Yacht (LY2)**

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005 Design Overview

The design is for an FRP composite, tri-deck Motor Yacht fitted with twin marine diesel engines driving screw propellers through reversing / reduction gearboxes.

The construction of the hull, deck and superstructure together with all interior joinery and furniture shall be designed and built to first class yacht building standards. Construction shall be lightweight yet immensely durable, using materials of the best quality, to Sunseeker Yacht standards.

The choice and specification of all equipment and fittings is to be made with consideration to practical seaman like requirements with minimum weight, balanced against durability, operational requirements and quality.

The yacht is to be designed, built and equipped to suit operation in Mediterranean or similar conditions.

Special consideration is to be made in the choice and specification of air-conditioning and ventilation systems, to ensure total suitability for the climate envisaged.

During the early stages of specification, it is advised that the owner / operator inform Sunseeker of the yachts potential operations and where possible the general cruising grounds of the yacht.

010 Principal Characteristics

Length Overall	40.05 Metres / 131' 5"
Length Waterline @ Normal Half Load	31.19 Metres / 102' 4"
Beam Maximum (inc. topside fender strakes)	8.09 Metres / 26' 7"
Draft @ Full Load	2.70 Metres / 8' 10"
Height from waterline to top of arch	9.20 Metres / 30' 2"
Displacement @ Light Load	181,400 kg / 399,918 lbs
Displacement @ Normal Half Load	189,600 kg / 417,996 lbs
Displacement @ Full Over Load	208,600 / 459,883 lbs
Owner and guest accommodation	10 persons
Crew accommodation	1 x Captain's double cabin 1 x Engineer's double cabin 4 x Crew in two cabins

(Design Note - The above values are preliminary and are therefore subject to change with completion of the first build and final specification)

Main Engines	Option 1	2 x MTU Marine Diesel Engines Model 12V 4000 M93 3138hp (2340kW) @ 2100 RPM
	Option 2	2 x MTU Marine Diesel Engines Model 12V 4000 M93L 3459hp (2580kW) @ 2100 RPM
	Option 3	2 x MTU Marine Diesel Engines Model 16V 4000 M93L 4613hp (3580kW) @ 2100 RPM
Propulsion	2 x Fixed pitch Propellers	
Generators	2 x 70kW 400/230V 3 phase 50Hz (Euro) 2 x 80kW 400/230V 3 phase 60Hz (US)	

015 Capacities

Fuel	
Normal Load Capacity (Main tank 18,150 litres + Day tank 3,500 litres)	21,650 Litres (5717 US Gals)
Optional Overload Tank Capacity (standard overload)	5,050 Litres (1334 US Gals)
Optional Overload Tank Capacity (extended overload)	8,000 Litres (2112 US Gals)
Total Long Range Capacity (standard overload)	26,800 Litres (7050 US Gals)

Total Long Range Capacity (extended overload)	29,650 Litres (7829 US Gals)

Fresh Water Capacity	4,950 Litres (1,307 US Gals)
Black Water Capacity	1,450 Litres (383 US Gals)
Grey Water Capacity	1,350 Litres (356 US Gals)

All capacities are provisional.

020 Performance

The below figures are based on a clean and serviceable antifoul surface and shaft / propellers being free from underwater growths. Maximum speed will be achieved at normal half load in UK waters without optional fixed fin stabilisation fitted.

Maximum Range at 10 to 12 knots (with 28,710 litres total fuel capacity) as follows:

Option 1	2 x MTU 12V 4000 Series M73L @ 2050rpm Maximum Speed = 21.5/22.5k Range = 1500 nm (10-12kn @ Normal half load)
Option 2	2 x MTU 12V 4000 Series M93 @ 2100rpm Maximum Speed = 23/24knots Range = 1500 nm (10-12kn @ Normal half load)
Option 3	2 x MTU 12V 4000 Series M93L @ 2100rpm Maximum Speed = 24-25 knots Range = 1500nm (10-12kn @ normal half load)

(Design Note - The above values are subject to the final specification. The yachts performance will be recorded by the builder during sea trials in calm conditions in UK waters prior to handover). Vessel performance may be compromised due to the external fins required to achieve stabilisation at rest.

025 Rules in force

The vessel will be constructed in accordance with the rules and regulations in force at the time of contract.

For a vessel entering the European market electrical systems will be built to European Specification:
230/400V AC 3 phase supply at 50Hz.

Vessels entering the United States market will be built to US Coastguard Regulations and Specification of 120/208V & 400V 3 phase supply at 60Hz.

Vessels will also comply to the Convention on the International Regulations for Preventing Collisions at Sea, 1972. (COLREGS)

030 - Classification (34 - Confidential)

MCA LY2 (Unrestricted) & RINA Commercial

030 Classification

As standard, the vessel will be built to:
RINA “Rules for the Classification of Pleasure Yachts 2011”. With the Classification Notation for Pleasure Yachts being:

C ✠ HULL • MACH Y Unrestricted navigation

030 Classification MCA Large Yacht Code 2

The vessel will be built to:
RINA “Rules for the Classification of Yachts Designed for Commercial Use 2011”. With the Classification Notation for Charter Yachts being:

C ✠ HULL • MACH Ych (MCA) Unrestricted navigation EFP, DMS

035 - International Certificates (34 - Confidential)

Certification - Suez canal tonnage certificate (issued by RINA)

035 International Certificates

At the time of delivery of the vessel, the builder shall supply the following documentation and certificates necessary for the proper operation of the vessel:

It is the responsibility of the operator / buyer to ensure that all documentation is in good order prior to departure to sea. The builder takes no responsibility for incorrect documentation if the vessel goes to sea, including operator’s licences, insurance and documentation.

- Interim RINA Certificate of Class for Pleasure Vessel
- Builder’s Certificate issued by the Builder.
- Compass adjustment Report.
- Interim Stability Book

045 Drawings Register

Sunseeker design drawings will be prepared in accordance with the specification applicable to each client. The drawing office will prepare drawings and carry out calculations necessary for the construction of the vessel in accordance with the chosen classification society, and or the operational requirements of the vessel.

This specification over-rules any contractual drawing in the event of a discrepancy between the two documents.

One hard copy of the following engineering drawings will be supplied to the buyers’ representatives at delivery of the yacht. The drawings will be supplied folded and bound within firm folders.

These drawings are not to be reproduced in any way without written consent from the Sunseeker design office. It is the responsibility of the buyer / operator to preserve these drawings during the service of the yacht.

Drawings will be designated to each subsection as detailed below and will be prefixed with the boat project code and customer code. Example S146-01-035-01

000 - General & Classification
050-50 Stability Book
050-51 Damage Stability Book (Unrestricted/charter)

200 - Hull Construction
220-01 Mid ship Section
220-02 Hull Shell Arrangement
220-03 Hull Stiffening Arrangement
224-50 Forward Frame Construction
220-51 Aft Frame Construction
225-01 Engine Girders

300 - Interior Fit-out
315-02 Structural Fire Protection
315-04 Sounds and Fire Insulation

400 - Exterior Fit-out
455-00 Mast Arrangement
471-01 Safety & Lifesaving Plan
480-01 Crane and Lifting Plan
481-01 Freeboard Mark

500 - Machinery
500-01 Engine Room Layout
500-XX Garage Layouts
501-XX Engine Geometry
545-02 Rudder Shelf installation

600 - Systems
611-01 Black Water System
616-01 Potable Water System
621-01 Grey Water System
625-01 Garage Ventilation
631-01 Air-conditioning System
631-50 Crew & Master Fresh Air Make-up
631-51 Guest Fresh Air Make-up
631-53 Galley Extraction
641-01 Bilge and Fire system
645-01 Fire Suppression System
651-01 Fuel Oil System
660-03 Hydraulic System incorporating Thrusters and Stabilisers (optional)
670-00 Auxiliary Hydraulic System
670-01 Auxiliary Hydraulic Forward Garage (optional)
675-01 Exhaust Installation
680-XX Raw Water System - Main Engines and Generators
685-XX Deck Drains & Scuppers

700 - Electrical
700-00 Electrical Equipment General Arrangement
700-03 Emergency Electrical General Arrangement
721-00 Earth Bonding
731-00 24 Volt DC Battery & Control Locations
740-01 Thrusters / Stabilisers Control Wiring
741-00 Platform Control Wiring
752-00 Fire Alarm System GA
756-00 Emergency Lighting Plan
760-00 Electrical Fittings Layout
776-00 Navigation Lights

900 - Arrangement
995-01 Customer General Arrangement

050 Stability, Buoyancy & Trials

Appropriate calculations will be carried out to ensure that the vessel has suitable trim and stability in all likely service conditions. Tanks and machinery shall be positioned to enhance / compliment trim and stability.

If required by the classification society or the flag authority, the builder will carry out inclining tests. A report of this inclining test establishing the vessel lightship weight and vertical centre of gravity can be supplied to the buyer upon completion if required.

Sunseeker International will carry out dock side trials and at sea trials as deemed necessary by the Designers and equipment manufacturers.

The above tests and trials will be part of a detailed programme according to the builder in UK waters. The tests and trial programme must be followed to exacting standards as these supply critical data for a new vessel entering service. No deviation from these tests will be allowed without the written consent from the design or production departments.

All official tests will be executed in the presence of the buyer's representative and / or the classification society where necessary.

The following systems and equipment will be tested along side:

- Quay Tests
- Fuel system
- Oil system
- Fire fighting system in engine room
- Sea water cooling system
- Bilge pumping
- Noise levels
- Cold & hot fresh water system
- Sewage system (Grey and Black water)
- Scuppers & deck drainage system
- Engine room ventilation
- Galley equipment
- Air conditioning
- Mooring capstans
- Tender launching & recovery
- Jet-Ski launching & recovery
- Stern gangway
- Hose test doors, windows & portholes
- Alarms & monitoring
- Navigation & communication equipment set-up
- Entertainment appliances
- Fire detection system
- Intercom system
- Generator
- Lighting (including emergency lighting)
- Batteries & battery chargers
- Shore power, converter & change over to generator
- Navigation lights
- Cathodic protection

The following systems and equipment will be tested during sea trials:

- Vessel speed

- Main engine fuel consumption
- Main engine data
- Engine controls, alarm & monitoring
- Manoeuvring & steering gear
- Windlasses
- Magnetic Compass Calibration
- Bow Thruster

All costs associated with these tests and trials will be met by the builder. At handover of the vessel, remaining fuel and oil in tanks will be invoiced to the buyer at prices current at time of trials.

055 Shipyard Management

The builder will endeavour to build the Yacht as efficiently and in a timely manner wherever possible. In order to facilitate this, and due to the nature of yacht building and suppliers varying lead times, the builder reserves the right to change the equipment mentioned in this document and / or drawings with equivalent type / quality and or purpose. All equipment shall be fitted to the manufacturer's recommendations wherever possible.

This specification will be updated as necessary during the design / production process.

The build plan timeline can be issued to the client on written request. The builder reserves the right to update the build time line as required without notice.

The builder, if required will appoint a dedicated sales contact as a project client liaison officer (CLO), who shall be the sole representative of the yard and be responsible for communications with the buyer and buyer's representative.

It is the responsibility of the buyer or buyer's representative to liaise with the CLO. At no time will Sunseeker accept instructions from the client / owner unless the CLO cascades the information in writing to the relevant departments.

060 Project Management

The client may appoint a representative who will act on behalf of the owner and will be the sole point of contact between the yard and the client. The client's appointed representative must be the single representative to act on his behalf. Any other consultants employed by the client must refer to the client's appointed representative.

Sunseeker will allow reasonable access to the yacht in manufacture at mutually agreed dates and times during the coarse of build. Visits will be accompanied during production and once the boat is launched greater access will be given to the crew allowing further familiarisation.

The language of communication will be English.

065 Individual Client Requests / Variations Prior to Start of Production

This document details the Yachts standard specification. This specification accommodates a family cruising vessel as a private yacht suitable for holidays in the Mediterranean or equivalent conditions. Additional cost will be incurred should the yacht be specified for commercial use or usage in tropical or Gulf climates.

The buyer may wish to use the yacht for extended cruising or operate the vessel as a commercial vessel. If the vessel is to be used for these or other scenarios, the buyer may wish to increase or vary the level of specification prior to build.

The client liaison officer shall document the buyers' request using a customer variation request form. The buyer variation procedure will investigate the modification requested and any consequences in time and cost, which may occur.

The costs associated with the buyer's variations will be calculated and if a credit is applicable, the CLO will inform the client at the earliest opportunity. Once the variation has been agreed, costed to the project and signed by the buyer, the specification will be updated.

An interior specification has been written to detail the standard specifications and any agreed variations can be detailed at the end of each applicable section within this document, on request.

A current Sunseeker Standard Credit Allowance can be issued on written request. Any Credit Allowances will be subject to an administration charge by the yard to facilitate the change request.

If the buyer has chosen the MCA option, items pertinent to MCA are also listed at the end of each section.

The client will be designated a Project Code to be used in all documentation.

070 Individual Client Requests / Variations During Production

Once production has commenced, the buyer may request, using a **'Client variation request form'** any reasonably practical variations or modifications that will not imply a significant deviation from the basic design. The buyer variation request form must be submitted, in writing to the projects client liaison officer in good time. The request procedure will investigate the modification requested and any consequences, which may occur. The change will be costed at this stage.

In order for the buyer's representative to be able to authorise changes, the buyer is asked to confirm in writing the upper limit to which changes can be instigated. Changes above this limit are to be accompanied with the buyer's written consent. The costs incurred for any requested change must be accounted for at the end of each month.

However when requesting variations and modifications during production the buyer must note and adhere to the contractual deadlines listed in the next section (075).

The builder will adhere to such variations and modifications provided that these:

- Have been requested prior to the purchase planned materials.
- Have been requested prior to the execution of the work affected by such modifications.
- The delivery time is not affected by such a request.

075 Contractual Deadlines

All items, modifications and / or variations must be specified before the below three key dates are triggered. These dates will be listed as part of the sales contract.

At the signing of the contract the following items must be agreed on:

- Main Engine type
- Stabilisation
- Layout
- Electrical Power System Frequency
- Hull colours

One calendar month prior to hull moulding commencement the following items must be agreed on:

- Any modification of machinery
- Any modification of standard entertainment equipment
- Any Modification of standard galley appliances
- Wood Finish (Colour and Gloss)
- Hardware Finish (Chrome and Brass)
- Tenders

One calendar month prior to hull moulding completion the following items must be agreed on:

- Fabrics
- Marbles / Granites
- Any Modification of standard navigation and communication equipment

Please note that no client requested change of specifications will be accepted in the last three months before delivery.

Any client requested modifications to the specification after the contracts are signed will be charged to the owner at the agreed price and terms.

The builder reserves the right to change the specifications due to supplier issues or fit for purpose issues without notification. Wherever possible these changes will be kept to a minimum, however the builder will endeavour to inform the client of any changes in good time.

080 Owners Supply

The following items are to be supplied by the owner:

- Safety Management System (for vessel in accordance with annex 2 of MCA LY2)
- Safe Manning Document (for vessel in accordance with annex 2 of MCA LY2 and flag administration of the vessel)
- Tender
- Jet-Ski /s
- Water sports Equipment
- Cooking Utensils
- Table Accessories
- Table Linens
- Rugs
- Stationary
- Guest Booklets
- Decorative Items
- Uniforms
- Charts, maps, Almanacs, chart table equipment etc. suitable to the operational cruising grounds.
- Computers
- General deck maintenance tools
- Machinery Space general tools
- Specialist equipment / machinery tools as manufacturers recommended planned maintenance schedules.

Installation of owner supplied items incurring costs will be quoted for and advised accordingly. For example, in the instance of an owner supplying the bathing platform tender, Sunseeker will charge for fabrication and fitment of platform chocks.

Equipment supplied by the buyer or their representatives shall not be included or covered by any warranties from the builder.

Buyer specified and supplied equipment that replaces the builder's standard equipment will carry an additional installation surcharge.

085 Spares

The builder can supply optional spare parts if required by the buyer, which would normally be supplied after delivery of the Yacht.

According to the yacht operational areas and commitments, a comprehensive spares package can be supplied by the yard, according to the equipment manufacturer's guidelines for planned maintenance and service.

The builder recommends that the operator / buyer carries sufficient spare parts to facilitate the service of equipment and systems, to ensure the operation of the vessel is not compromised.

Classification societies may require spares on board for critical systems. This is the responsibility of the operator to be aware of these requirements and comply at all times.

090 Insurance

The builder shall be responsible for full insurance of the vessel during the build commissioning periods, and up until the client's signature of acceptance. The insurance does not include "client supply items" that are sent to the yard during the build process, insurance of which is the client's responsibility.

The yard has strict guidelines for crew access to the boat while in build and being commissioned, which need to be adhered to at all times.

095 Acceptance and Delivery

On completion of the vessel, it is required that the yacht and her equipment are to be operated by a qualified, responsible crew who are to adhere to the correct operating procedures and maintenance schedules at all times. The vessels warranty agreement shall be dependant on following the correct operating procedures and maintenance schedules.

These procedures and schedules shall be given to the crew on completion of the vessel and demonstrated during the sea trial and handover period. The yard shall accept no responsibility for the misuse of equipment after handover. The documentation regarding vessel operation shall take the following format:

- The technical specification shall be updated to the as built machinery, systems, electrical and electronics functionality of the Yacht.
- The drawings relevant to the Yacht (045) shall be updated and be suitable for operation.
- The vessel shall depart with the trials and test data as part of the Yachts documentation.

It is the crew's responsibility to maintain the vessel and systems in service, and carry out and record all service and maintenance works done in a professional manner. In the event of the Captain, crew or vessel operators, departure, it is a requirement that the same exacting standards are handed over, with regard the operation and maintenance procedures, to the new vessel operators.

After sea trials and quay tests the buyer, or their representative, will receive the yacht afloat in working order at the builders yard on a specified date. Fuel and general vessel status is to be recorded prior to departure and the final invoice is to be adjusted accordingly. Final payment for the vessel shall be due prior to the vessel's departure.

200 - Construction (34 - Confidential)

MOULDING DETAILS:

Hull (below waterline)	White
Hull (above waterline)	White
Hull band	White
Bussell & Platform	White
Stern	White
Deck	White
Superstructure	White

200 Construction

The hull and superstructure mouldings will be built from composites to the Rules and Regulations for the Classification Society.

Within the constraints of FRP composite construction, special effort is to be made to achieve the fairest hull finish possible and all mouldings will have a gel coat or equivalent finish.

Prior to the start of the construction of the hull, the client will be asked to inspect and sign a panel of the colour and finish as detailed in the sales contract. This panel will be kept for the duration of the build.

Maintenance of the gel coat is the responsibility of the client and all gel coat finished surfaces must be kept clean and free from contaminants. Discolouration and fading may occur if strong cleaning agents are used or inadequate protection is provided for prolonged exposure to UV.

The yacht will be inspected during handover and any defects will be repaired prior to final handover.

220 Hull Construction

The entire shell and the majority of the stiffening of the hull will be in hand laid FRP.

The hull topsides will be gelled in Sunseekers' exclusive XL gel coat for a white hull and NPG gel for a coloured hull to give the best possible weathering resistance and gloss retention. For a coloured hull the client shall inspected, assess and sign for, prior to the commencement of the moulding process, a panel which shall be taken from the surface of the hull mould. The panel will confirm colour, surface finish including a proportion of blemishes and imperfections. The hull below the waterline will be gelled with an NPG based gel coat. To optimise the resistance to osmotic blistering, the entire hull mould will have a skin coat of powder bound chopped strand matt with vinylester resin. It is recommended that the vessel is lifted at the end of each season in order to replace anodes and antifoul where necessary see 490.

The remaining hull shell consists of a single skin laminate in the bottom using multi-axial reinforcements with a substantial increase in thickness in the keel area, hull sides will be of a sandwich type construction.

The hull shell will be stiffened by longitudinal stringers and deep girders, these in turn are supported by transverse bulkheads, FRP ring frames and watertight bulkheads.

The longitudinal stiffeners will be of unidirectional and multi-axial plies over non-structural foam formers in way of stringers and over PVC foam engine girders.

Additional reinforcements are provided in way of the propeller shaft brackets, rudders and wherever there are concentrated loads requiring an increase in strength or stiffness.

230 Sun Deck Construction

The sun deck will consist of a PVC foam sandwich shell that is stiffened by a number of low profile longitudinal and transverse stiffeners. All exposed exterior faces of the deck will be gel coated using NPG or XL gel.

235 Accomodation Deck Construction

All accommodation decks will be of a stiffened sandwich construction. All exposed exterior faces of the deck will be gel coated using NPG or XL gel.

240 Superstructure Construction

The superstructure will consist of a PVC foam sandwich shell that is stiffened by a number of low profile longitudinal and transverse beams and frames, which in turn are supported by non-watertight bulkheads and pillars where necessary.

All exposed exterior faces of the superstructure will be gel coated using NPG or XL gel.

270 - Integral Tanks (34 - Confidential)

Forward long-range fuel tank (5,630 litres)

270 Flybridge Arch Construction

The arch will consist of a stiffened PVC foam sandwich construction. All exposed exterior faces of the arch will be gel coated using NPG or XL gel. Every effort is made to construct the upper mouldings in the most efficient way with a strong emphasis on weight reduction.

280 Integral Tanks

All tanks will be of a composite construction. They will all be built around the hull structure and will be lined with appropriate materials that will resist penetration of the liquid that they are containing.

All tanks shall be fitted with senders of appropriate type and shall be fitted as near to the centre of the tank as possible. Accurate measurements for fuel levels can be taken when underway at speeds up to 15 knots before running trim will adversely affect the accuracy of the readings.

All integral tanks are fitted with access facility for inspection.

290 Small Moulding Construction

All small mouldings, depending on size, will be built either from single skin laminates or of a sandwich type construction.

All exterior mouldings will be gel coated using NPG or XL gel and all remaining mouldings will be gel coated according to its use and position inside the boat.

301 - Interior Fit-out Construction (34 - Confidential)

Rise and Fall TV to be moved between the forward columns with small low level stowage unit left of the Main Deck Saloon

301 - Interior Fit-out Construction (34 - Confidential)

Twin Guest cabin option - Inboard berth moves out-board to create double berth in the Port Forward Twin Guest Stateroom

301 - Interior Fit-out Construction (34 - Confidential)

Twin Guest cabin option - Inboard berth moves out-board to create double berth in the Stbd Forward Guest Stateroom

301 - Interior Fit-out Construction (34 - Confidential)

Optional Master Stateroom arrangement with starboard side fwd walk in wardrobe with angled entrance, starboard side aft walk in wardrobe and inboard aft walk in wardrobe with berth moved forward to suit (ref drawings). Vanity unit with stool on port side.

301 - Interior Fit-out Construction (34 - Confidential)

Second helm seat in Wheelhouse

301 - Interior Fit-out Construction (34 - Confidential)

Interior Wood Finish - Black American Walnut - Satin Finish in lieu of standard

301 - Interior Fit-out Construction (34 - Confidential)

Tinted film to side windows and sliding doors

301 - Interior Fit-out Construction (34 - Confidential)

Head and bidet moved to the Master Stateroom en-suite to suit revised cabin arrangement

301 - Interior Fit-out Construction (34 - Confidential)

Upper Deck En-suite in lieu of Day Head. Vanity unit moved forward 200mm in to Servery

301 - Interior Fit-out Construction (34 - Confidential)

Pullman berths to be fitted on the inboard bulkhead of both the port and starboard twin guest cabins

315 Noise/Vib/Fire Insulation

Specialist Consultants have advised on the best materials and their situation, in order to minimise both structure and airborne sound sources. Weight constraints are also considered essential in order to achieve the overall design philosophy.

Engine room
Main engines shall be flexibly mounted to rigid beds, and gearbox units to be isolated from structure. Generators will be fitted on flexible mounts to a rigid generator bed specifically designed to prevent structurally transmitted noise and vibration.

Silencers of 'Water Lift' type to be fitted in both main engines and generator exhausts.

Ventilation trunking for air in and out of the engine room shall be clad with an acoustic insulation. Added massed layers will be incorporated in accordance with advice from the acoustic expert.

The main engine room bulkhead, engine room ventilation trunking and saloon sole will be constructed from a sandwich type material consisting of a high density rubber mat or similar as recommended to reduce airborne noise.

Accommodation
An acoustic membrane is to be laid under carpets where required. Customers may request wooden floors, it should be noted that wooden floors are less efficient as noise insulators. Particular attention given to the floor between client's and crew accommodation, and the galley forward bulkhead.

The following areas in operation will have reduced sound levels.

Single Generator noise trial – 1 Generator, minimum / medium speed A/C

- Owner's Accommodation 40 dB (A)
- Lower Guest Cabins 48 dB (A)
- Main Deck Saloon 48 dB (A)
- Sky lounge 42 dB (A)

Cruising @ 14 kts – Calm Sea State [1]

- Owner's Accommodation 60 dB (A)
- Lower Guest Cabins 70 dB (A)
- Main Deck Saloon 70 dB (A)
- Sky lounge 60 dB (A)

[1]Max significant wave height (H⅓) of 0.2-04m, max wind force 2 (4-7 mph), max rudder angle 1 degree

Fire Insulation
The engine room hull side shell, bulkheads and deck heads shall be insulated with an approved type material. Where pipes, cable runs and ducts pass through machinery space bulkheads and decks they are to be fitted with insulation and a watertight material in accordance to Classification requirements.

The Main Deck Galley and any other enclosed spaces containing cooking appliance's will require enclosing in a B15 Fire Boundary.

315 Noise/Vib/Fire Insulation MCA Large Yacht Code 2

In order to comply to Classification Society rules, the Fire insulation in the engine room is will be changed to:-

- Two layers of 20mm Promaglaf WB Foil Faced Fire Blanket, density 130Kg/m³,
- One layer of 10mm Promagaurd Fire Blanket Foil Faced, density 240Kg/m³
- One layer 10mm Promagaurd Fire Blanket, Density 240Kg/m³.

The fire insulation will be held in place using Big Head "Pinsulator" Pins; these are bonded in place using Sika 291. All engine room fire insulation within the Engine room will extend below the waterline to chine level on hull sides and above keel on forward and aft bulkheads.

Noise Levels on board should meet the recommendations so far as is reasonable and practicable the IMO Code Resolution A.468 (XII), published 1982 for the crew accommodation.

320 Bhd Finish - Hard Lining

Generally, bulkheads will be finished in straight grained gloss or satin finished American Cherry or optional Black American Walnut. For functional and durability reasons, all veneers are fixed to a plywood backing and securely adhered to the inner supporting bulkheads.

In some areas, bulkhead finishes may include alternative soft materials, from the Majilite Luxury range of materials from the Sunseeker Superyacht fabric collection.

Typically for reasons of durability, bulkheads in crew cabin areas will be lined in vinyl or plastic laminate finishes from the Sunseeker Superyacht range.

325 Carcass & Bed

The interior design includes the integration of fitted joinery units including beds. The strength and stability of each unit depends on the integrity of an inner carcass structure. The inner structure is a wood effect foil-back, to compliment the outer wood finish.

Crew cabin cabinets and storage units shall be matt ivory finish.

330 Veneer Lacquer Pack

In order to achieve a luxury finish, each item of furniture is faced in straight grain Walnut or Cherry timber veneered panels and these match in with adjacent timber veneered bulkheads. The design intent is to reflect a contemporary interior finish. Customers wishing to modify and introduce significant change in style will be subject to a Customer Variation request.

For design continuity, furniture items are lacquered to match in with all timber finishes. All cupboard doors and drawer units incorporate hinges, stays and slides. Each unit is fitted with drawer and cupboard catches, selected from the Sunseeker Superyacht range and specified to suit the interior styling.

332 Colour Lacquer Pack

All items of furniture and perimeter shelves are fitted with veneered and lacquered tops constructed to match the timber veneers and solid hardwood mouldings.

340 Lac Fiddle & Corner Post

All fitted furniture corner pieces and perimeter shelf tops include a decorative hardwood moulding "fiddle" section, selected from the Sunseeker Superyacht standard range. These elements form an integral part of the aesthetic design and also protect the exposed edges of each unit or shelf. Ultimately, these components help to create a more durable finish to each item of furniture.

345 Cabin Door/Frame/Hardware

Interior cabin doors are manufactured using sandwich construction for strength and stability, and subsequently finished in straight grained timber veneers selected from the Sunseeker Superyacht range.

To ensure continuity of finish, the door and frame are lacquered to match veneered bulkheads and items of furniture. Door ironmongery to include special inset hinges and door handles. Door handles can be specified from the Sunseeker Superyacht Standard range and in relation to the interior style of the yacht.

Crew cabin doors shall be matt ivory finish with ventilation grills fitted.

350 Service/Escape Door/Trap

In working or more functional areas of the yacht, doors will be finished in white. Some doors shall be of a watertight construction.

350 Service/Escape Door/Trap MCA Large Yacht Code 2

All doors in escape routes will be operable from either side. They are all to be operable without key. All handles on the inside of weathertight doors and hatches are to be non removable.
Where doors are lockable measures to ensure access from outside the space are to be provided for rescue purposes. Key location will be confirmed by the relevant Flag Society.

360 Shower Trays & Baths

A GRP shower tray with suspended hard surface flooring will be used in the Master and Guest suites as well as the Captains cabin.

A self-contained wet cell incorporating the shower will be used in the three crew cabins.

The standard bath in the master cabin en-suite will be the from the Hansgrohe Pharo range with Jacuzzi jets only.

365 Ensuite Hardware/Fitting

(34 - Confidential)

Bidet hand showers (Ablution hose) required beside toilets in Forward Twin Guest En-Suites, Day Heads and Crew (to be located on the right hand side when seated) as per 52213131

Sunseeker Superyacht Bathroom designs include fittings from Hansgrohe Axor Design ranges.

Items specified include:

- Single basin mixer tap sets
- Towel holders
- Toilet roll holders
- Soap dispensers
- Toothbrush holders
- Robe hooks
- Toilet brush holder with brush
- Shower screens and Hansgrohe shower fittings.

370 - Safe (34 - Confidential)

Safe - 2 brick - with Digital lock for the Wheel house deck

370 Cabin Hardware/Fitting

All cupboard doors and drawer units incorporate hinges, stays and slides. Each unit is fitted with drawer and cupboard catches, selected from the Sunseeker Superyacht range and specified to suit the interior styling.

370 Cabin Hardware/Fitting MCA Large Yacht Code 2

- Means will be provided to allow the cook to be secured in position, with both hands free
  for working, when the vessel motions threaten safe working.
- Galley floor should be provided with a non-slip surface
- Galley hob extractor pipe work, to be insulated.
- Galley hob will be provided with a removable pan up-stand.
- Ventilation fans for enclosed galleys are to be capable of being stopped, and main inlets and outlets of ventilation systems closed, from outside the spaces being served.
  This position should not be readily cut off in the event of a fire in the space served.

375Stone/Glass/Avonite Surface

Sunseeker Yacht interiors include a select range of countertop materials. For both aesthetic and functional reasons these materials are chosen as part of a standard range to further promote both quality and luxury.

The successful application of each material relies on a good sub structure/carcass and for this reason granite and avonite (composite resin material) work surfaces are applied to a rigid plywood sub tops of a required thickness.

380 Floor Covering/Finish

In order to maintain design continuity and to complete the range of stylish and practical finishes, the Sunseeker Superyacht standard range of floor coverings consist of high quality natural materials. The range includes all wool textured and velvet pile carpets, lightweight stone and wooden materials. To promote comfort and quality, carpets are fitted with underlay, stone and wooden floors with suitable rigid backing materials. The specification of flooring in crew quarters will include good quality vinyl flooring.

385 Accom Fixed Fabric Lining

All private cabins are planned to provide maximum comfort and various design details aim to personalise these spaces. For this reason, the Majilite luxury collection of lining materials and fabrics has been carefully designed to include a wide choice of lining, upholstery and decorative fabrics. Ultimately, this extensive range of materials and details will allow a mixture of individual styles to be easily selected.

The Sunseeker Yacht standard design will include padded headboards. Additionally, to break up the timber lined bulkheads, leather or Novasuede feature panels can be introduced. The outer window area (window band) and the headlining panels are finished in materials from the Majillite luxury collection and final selection is based on personal requirements. To provide the illusion of more space, mirror features can also be incorporated to bulkhead areas.

386 Blind & Curtain

The Sunseeker Yacht standard design will include manually operated venetian blinds for all window dressings with the exception of the Wheelhouse and galley / lobby doors.

The Main Deck and Upper deck patio doors will have full length manually operated curtains. Blind and curtain material can be selected from the Sunseeker Superyacht collection.

390 Accom Loose Upholstery

The Sunseeker Superyacht collection of fabrics is designed to provide a variety of colour ways and textures. From this extensive range, any combination of materials can be selected to provide a stylish and individual design.

All fabrics, lining materials and architectural finishes, such as wood and stone have been designed to work in sympathy within the range. The Sunseeker Superyacht collection includes durable upholstery fabrics, such as natural leathers, cotton and wool fabrics to provide practical and stylish options for items such as seating and dining chairs.

Please see Section 900 for further details.

390 Accom Loose Upholstery MCA Large Yacht Code 2

Upholstery composites (fabric in association with any backing or padding material) used throughout the vessel will be approved in accordance with the IMO FTP Code, Annex 1, part 8, or equivalent.

Organic foams used in upholstered furniture and mattresses shall be combustion-modified type.

Suspended textile materials such as curtains or drapes will be approved in accordance with the IMO FTP Code, Annex 1, Part 7, or equivalent.

395 Table & Seating

The Sunseeker Yacht design collection includes a range of classic seating elements. All fitted units can be neatly integrated as part of the main plan of each cabin, dining or saloon area. The design of each seat allows for maximum comfort when relaxing or entertaining. Also, a range of dining chairs can be selected and upholstered from the Sunseeker Yacht ranges.

Dining area outboard console tops to consist of granite surfaces and lacquered timber faced details to the carcass front. Dining and Coffee tables are specially designed to suit Sunseeker Yacht standards and the interior of the Yacht.

398 Crockery/Cutlery/Glasses

Crockery, cutlery and glassware is provided for the number of guests on board with appropriate stowage.

- Crockery shall be from selected Haviland ranges.
- Glassware shall be from Dartington ranges
- Cutlery shall be from Robbe & Berking stainless steel range

Crockery and cutlery shall also be provided for the crew, from the standard Sunseeker range with stowage in the Crew Mess.

400 - Exterior Fit-out (34 - Confidential)

Balcony - 1 x Main Deck Saloon bulwark balcony Starboard side with patio sliding doors

400 - Exterior Fit-out (34 - Confidential)

Enlarged foredeck arrangement with sunpad in lieu of seating and table

400 - Exterior Fit-out (34 - Confidential)

Stainless Steel backlit sign writing - name TBC

400 - Exterior Fit-out (34 - Confidential)

Standard option Sky Deck arrangement to have aft spa tub and large sunpad arrangement, fwd curved feature bar, portside u-shaped seating with teak table on stainless steel pedestal and starboard teak table and chairs to seat 10.

400 - Exterior Fit-out (34 - Confidential)

Port side Saloon wall aperture to be fixed glass in stainless steel frame to match starboard side.

400 - Exterior Fit-out (34 - Confidential)

Outboard of Master Stateroom inset balcony there is to be glass inset in to the hull - see drawing for reference

400 - Exterior Fit-out (34 - Confidential)

Backlit (white) stainless steel signwriting to be 'LONASH'

403 Anchor Winches

Twin Muir VCR 8000 hydraulic vertical anchor windlass are to be fitted. They will be single speed operating in both directions from a remote wandering cable control, mounted in the forward forepeak locker.

- The integral base and chain pipe capstan shall be chrome bronze finish with stainless steel shafts.
- Manually operated stainless steel band brake with 45 degree hand wheel.
- Low profile chain stop and Devils Claw roller Arrangement.
- Cable gypsies, vertical capstans and roving hand control to handle the anchors.

Changed 10 Sept 2012 to come into effect onboard 525 13 155

new info:

403 Anchor Winches

Twin Lewmar V10 hydraulic vertical anchor windlass are to be fitted. They will be single speed operating in both directions from a remote wandering cable control, mounted in the forward forepeak locker.

- The integral base, capstan drum, top cap, spurling pipe and brake wheel will be stainless steel.
- A stainless steel band brake with 45 degree hand wheel will allow manual deployment of the anchor.
- A low profile chain stop is to be used when the anchor is set.
- A devils claw is to be used when the anchor is fully retrieved.
- Chain gypsy is calibrated for 17.5mm stud link chain
- Capstan drum can be raised from the gypsy to enable use of the capstan drum alone for mooring line adjustment when the anchor load is taken on the chain stop or devils claw.

403 Anchor Winches MCA Large Yacht Code 2

Any powered deployment system should be connected to an emergency power supply or be capable of being manually operated.

404 - Anchors (34 - Confidential)

Anchors (x 2) in polished stainless steel finish in lieu of std (with standard galvanised chain)

404 Anchors

Two 210 kg 'Manson' 1200mm shank height Galvanised anchors are to be stowed in stainless steel recessed pockets integral with the hull shell. Seawater washing is provided via the Fire Main Circuit with an outlet incorporated into each hawse pipe for chain cleansing.

The seawater washing is controlled and valved manually from the foredeck locker, with the fire pump operation, controlled from the Wheelhouse.

Anchors will be Type Approved.

406 Chains & Swivels

Chain bins are to be fitted in the forepeak with reinforced rubber matting to protect any exposed surfaces. This area is accessed through the foredeck hatch.

Starboard side 165 metre length of 17.5mm

Port side 120 metre length of 17.5mm

High tensile (Grade U2) galvanised stud linked chain with a proof load of 128kN and a minimum breaking load 179kN.

Galvanised Swivel suitable for anchor and chain installation

(Available option port side anchor chain upgraded to 165m length)

Each anchor chain is to be marked every 10 metres.

413 - Cleats & Mooring Bollards / Fairleads (34 - Confidential)

2nd pair of mooring bollards to be fitted in the forepeak area

413 Cleats & Mooring Bollards

All bollards are of Stainless Steel construction shall be of sufficient strength to take the prescribed class mooring loads. As standard, a total of ten mooring bollards are fitted in the following locations:-

Foredeck	1 x Port	1 x Stbd
Main Deck Aft Cockpit	2 x Port	2 x Stbd
Main Deck Midships	1 x Port	1 x Stbd (incorporated into fairlead)
Bathing Platform Fixed Ears	1 x Port	1 x Stbd

414 Fairleads

All fairleads shall be of Stainless Steel manufacture and be of sufficient strength to take the prescribed class mooring loads and are sited in the following areas:-

Foredeck	2 x Port	2 x Stbd

Main Deck Aft Cockpit	2 x Port	2 x Stbd
Main Deck Midships	1 x Port	1 x Stbd
Bathing Platform Fixed Ears	1 x Port	1 x Stbd

416 Stern Capstans

Two Muir VC6000 hydraulic capstans with ribbed type drums shall be fitted on the port and starboard sides of the aft deck. They will be single speed operating in one direction and will be controlled by locally mounted foot switches.

421 - Passerelle & Crane (34 - Confidential)

Passerelle Upgrade - Polished stainless steel finish in lieu of white powdercoated

421 Passerelle & Crane Layout

A self-stowing passerelle with circa 6.00 metre extension and 580 mm wide is fitted with handrails as standard. It is to be manufactured of aluminium alloy (white powder coated finish) with a laid teak walkway.

The passerelle will be stowed in an FRP composite or alloy watertight trunk, built into the deck head structure of the garage, pump room and machinery space, incorporating a transom-closing hatch. It is to have electro-hydraulic operated stowing, raising/lowering and telescopic action and be controlled with local switches. The passerelle opening is concealed behind an integrated GRP step, forming part of the starboard transom step assembly. This need's to be folded down for normal passerelle operation.

The passerelle will overhang the platform by circa 1.30 metres.
The standard vessel will have no deck cranes.

421 Passerelle & Crane Layout MCA Large Yacht Code 2

Passerelle will be built to a recognised standard and will be clearly marked with the manufacturers name, the model number, the maximum design angle of use and the maximum safe loading. (By number of persons and by total weight).

422 - Tender Launch & Recovery (34 - Confidential)

Storage required for 2 x Sea Doo, Dive compressor & up to 10 dive bottles (minimum 5 bottles)

422 Tender Launch-Recovery

The garage arrangement is designed to accommodate a diesel engine powered tender (circa 5.8m) stored centrally, and two petrol engine powered jet skis, one stored either side. Depending upon the tender arrangement, this space can be utilised for diving equipment.

The aft tender garage arrangement shall be such that the tender / jet skis can be launched and recovered efficiently using the lowering bathing platform. Tender launch and recovery is achieved utilising a hydraulic winch and low profile lubricated pads and roller system. Rollers and lubricated pads will require crew assembly and dis-assembly on the platform.

The tender garage door will be opened and closed via twin hydraulic cylinders (port and starboard). An emergency manually operated means of closure shall be provided with the vessel as part of the auxilary hydraulic system. The garage door will be hydraulically locked and unlocked using hydraulically powered locking pins in accordance with Classification requirements. The status of the garage door, (open or closed) will be monitored on the Tijssen MPA.

If the conditions are not suitable for the launch and recovery procedure, the mother ship must be repositioned to gain lee from land or a safe haven.

422 Tender Launch-Recovery MCA Large Yacht Code 2

Enclosed Garage spaces with fuel must be fitted with: -

1. A manual water spray system giving coverage of 3.5 ltr/m²/minute over the total area of deck, which maybe
   taken from the fire main with the isolating valve located outside the garage. Adequate provision should be
   made for drainage of water introduced to space.
2. A fixed fire detection and alarm system complying to the regulations needs to be fitted
3. Ducted mechanical exhaust ventilation, which is isolated from other ventilated spaces, should provide at
   least 6 air changes per hour (based on the empty space) and for which reduction of the airflow should be
   signalled by an audible and visual alarm on the navigating bridge and at the “in port” control station(s).
   Exhaust ducting should be arranged to extract from the area low over the bilge. If the fan motors are
   located in the space or in the ventilation duct they should be certified safe to the correct designation for the
   flammable vapour/liquid. The ventilation fans should be of non-sparking type and the ventilation system
   should be capable of rapid shut down and effective closure in event of fire.
4. An approved gas detection system should be installed, with audible and visual alarm in the wheelhouse and
   where it may always be observed by the crew.
5. All electrical equipment located up to 450mm above the deck should be certified safe for petrol vapours.
6. The following equipment regardless of position should be certified safe for the flammable vapours: -
   a. Gas detection system
   b. Bilge system
   c. Fire detection system
   d. At least one light fitting (on a dedicated circuit, possibly emergency)

There is no requirement for an escape from the main garage space.

Containers used for the carriage of flammable liquids will be constructed to a recognised standard appropriate to
the contents and each container clearly marked to indicate its contents.

424 - Jetski’s & Tenders (34 - Confidential)

Pascoe 6.2m tender to be supplied

424 - Jetski’s & Tenders (34 - Confidential)

2 x Jet Ski Seadoo RXP-X 260 RS to be dealer supply

424 - Jetski’s & Tenders (34 - Confidential)

2 x Seabobs Cayago F7 to be dealer supply

424 Jetski's and Tenders

Jetskis and tenders must be specified within the constraints of the garage space. Any tender specified by the owner must have a reinforced keel which can take the maximum weight of the tender at any single point along its keel length.

The tender manufacturer must be prepared to reposition launch and recovery fixtures in order to ease the launch and recovery process.

431 Hatch,Window,Port light

All windows shall be of toughened safety glass with thickness to Classification requirements. Generally all windows are to be fixed pattern, tinted/ mirrored (as specified) glazing with the exception of wheelhouse front and side windows, which are to be clear glass. Window frames for all glazing shall be be glued into the superstructure window rebates using 'Sika' adhesive/sealing products to Classification society requirements.

Lower guest cabin sloping port lights or the optional Organic style portlight shall be fixed. Opening portlights may be fitted in the Crew Area which are provided with integral storm shutters.

Deadlights or storm shutters are to be provided to Classification requirements. They will be manufactured of aluminium alloy/FRP panels as acceptable by the Classification Society. Storm shutters are omitted where laminated toughened glass has been accepted by the Classification Society.

In accordance with Classification requirements, any opening portlight's must be kept closed whilst at sea at all times. All port lights shall be tested prior to handover and it is the responsibility of the operator to ensure that the port lights are closed firmly at all times whilst at sea.

Sunseeker accept no responsibility for damage caused to window bands and surrounding fabrics whilst the vessel is in service, due to the port lights being incorrectly closed.

Updated Item 19/12/2011

Cleaning tracks to be fitted above the master stateroom window and upper deck saloon window each with a trolley system and 1 x harness supplied

431 Hatch,Window,Port light MCA Large Yacht Code 2

All Portlights will have to comply with MCA requirements and testing procedures.

All Portlights will be provided with either permanently attached deadlight or portable deadlights.

Operational instructions to the master will be issued for when deadlights must be attached.

Storm shutters are required for all windows in the front and sides of first tier and front windows of the second tier of superstructures. If storm shutters are interchangeable port and starboard, a minimum of 50% of each size will be provided. Storm shutters may not be required depending on the outcome of a glazing strength test.

Side and front windows to the navigating position should not be constructed of polarised or tinted glass.

All opening portholes are to be made non-readily opening.

432 - Patio Door / Balcony (34 - Confidential)

Master Stateroom Inset Balcony with sliding patio doors (starboard).

432 Patio Door Assy

The sliding patio style door's at the aft end of the Main Deck Saloon and Upper Deck Saloon shall be of weathertight construction. Any optional side deck saloon 'patio style' doors shall be of weathertight construction and provided with weathertight storm boards for low level usage.

432 Patio Door Assy MCA Large Yacht Code 2

The patio doors will have a 150mm sill height

The weather deck door leading to engine room/Laundry area will have a sill height of 300mm and a further 300mm removable sill to ensure a 600mm total height

The lobby doors will have a 150mm sill height and a further 150mm removable sill to ensure a 300mm total height.

The wheelhouse doors will have a 150mm sill height minimum.

434 Pop out door Assy

Weather-tight pantagraph style doors shall be fitted giving access from port and starboard wheelhouse deck into the wheelhouse.

Hinged weather-tight doors on the port and starboard side main deck shall give access to the main deck lobby and galley accordingly.

Pantograph style doors shall be provided on the main deck to gain access to the engine room and the vessels safety / fire locker.

In accordance with classification requirements, specific doors will need to open forwards.

Updated Item 19th Dec 2011

Where required the locks for the pop out side doors shall include a cover plate

434 Pop out door Assy MCA Large Yacht Code 2

All weathertight door's and hatches shall be monitored in the Wheelhouse. This shall include, but not limited to:-

Main Deck Aft Patio Door
Main Deck Engine Room access door (port)
Main Deck safety locker door (stbd)
Galley (Port Side deck)
Lobby (Stbd side deck)
Aft Tender garage door
Pump room escape hatch (Main deck aft cockpit)
Wheelhouse deck escape hatch
Machinery space watertight doors (port & stbd)
Tender garage watertight doors

Optional:- Master Stateroom Balconies
Optional:- Main Deck Saloon side patio doors

447 Rail-F'b'dge,support,w'bar

All exterior Skydeck and Upper Deck handrails shall be of 38 mm tubular stainless steel. They shall be positioned as required by regulation with a view to having the minimum impact on the aesthetics of the vessel. Exterior handrails and side decks rail are designed to prevent water pooling within socket.

Upper Deck rails in way of the liferafts may be fitted with manually removable pins to facilitate liferaft deployment.

Particular attention is made to stainless steel fittings. All components (rails/stanchion bases/bolts/pins etc.) are to be 316L high-grade marine stainless steel.

448 Rail-Side&fore deck,pulpit

All exterior Main Deck Bulwark and Foredeck handrails shall be of 38 mm tubular stainless steel. They shall be positioned as required by regulation with a view to having the minimum impact on the aesthetics of the vessel. Exterior handrails and side decks rail are designed to prevent water pooling within socket.

Particular attention is made to stainless steel fittings. All components (rails/stanchion bases/bolts/pins etc.) are to be 316L high-grade marine stainless steel.

450 Rail-Stern,platfm,hull ear

All exterior Main Deck Aft Cockpit and Stern handrails shall be of 38 mm tubular stainless steel. They shall be positioned as required by regulation with a view to having the minimum impact on the aesthetics of the vessel. Exterior handrails are designed to prevent water pooling within socket.

Particular attention is made to stainless steel fittings. All components (rails/stanchion bases/bolts/pins etc.) are to be 316L high-grade marine stainless steel.

No rails are fitted around the perimeter of the Bathing Platform as standard however are available as a Client specified option.

451 - Biminies , Awnings, Parasol & Canopies (34 - Confidential)

Retractable Electric Sun Awnings required for Main Deck and Upper Deck Overhang in Sunbrella Plus Oyster SUNTT 5030 152

451 - Biminies , Awnings, Parasol & Canopies (34 - Confidential)

2 x Retractable Electric Sun Awnings required for Sky Deck in Sunbrella Plus Oyster SUNTT 5030 152

451 Biminies, Awnings&Canopies

No biminis, awnings or canopies are supplied as standard.

453 Bathing platfom ladders

A manual Bathing Platform swim ladder shall be provided with sockets on each side of the platform. Stowage shall be provided within the tender garage space.
A removable side boarding ladder with stowage shall be provided, socket design to prevent water pooling within socket.

454 Safety Gates

The Main Deck Aft is provided with two stainless steel safety gates (1x Port & 1x Starboard) manufactured from 38mm tubular stainless steel. They shall be positioned as required by regulation with a view to having the minimum impact on the aesthetics of the vessel.

Particular attention is made to stainless steel fittings. All components (rails/stanchion bases/bolts/pins etc.) are to be 316L high-grade marine stainless steel.

455 Masts

A combined radar platform (white powder coated finish) positioned on top of the hoop structure is designed to incorporate all necessary navigation/communication equipment. The standard radar platform is designed to accommodate a single 6ft radar scanner

Carbon fibre ensign staff, complete with halyard, cleat and cap, suitable for a 2.5 yard ensign, is to be positioned on the Upper Deck.

456 Rub Rail Fender

Upper and lower fender bumps on the hull freeboards, will be of a suitable structure with additional gel coat layers.

457 Deck Mounted Fittings

All exterior fitting's shall be of marine grade and recessed as necessary. All louvers and vents to be of marine grade and recessed as necessary. Any externally fitted vent boxes will be self draining where appropriate and all heights and positions shall comply with Classification Society Rules.

461 - Exterior Furniture (34 - Confidential)

Large teak dining table with loose seating for 10 x guests required in the upper deck aft cockpit

461 External Furniture

Deck furniture shall be made of GRP, teak or stainless steel. Any moulded exterior seating and sunpads shall have a drainage recess in the base of the moulding which will drain direct onto deck where possible. The main deck aft seating will accommodate storage for bottled water and canned drinks. No drinks or heavy stores are to be stored on the upper decks of the vessel.

462 External Upholstery

All deck furniture upholstery will be of suitable weather resistant type and selected from the Sunseeker Superyacht range of waterproof fabrics.

463 Exterior covers

A standard set of weatherproof covers shall be provided for:-

- Sky Deck Wet Bar
- Sky Deck Seating
- Sky Deck Table

- Wheelhouse Fwd & Side Screens (Mesh Type only)
- Main Deck Exterior seating
- Main Deck Exterior Tables
- Upper Deck Exterior seating
- Upper Deck Exterior Tables
- Wheelhouse Deck Seating

464 Hot Tub components & Assy

As standard, the Yacht is provided with a Jacuzzi Hot Tub on the flybridge deck. It shall be manufactured of GRP construction and will be suitable for use whilst at anchor or alongside. Fresh water is provided from the yachts hot and cold systems and is filled by means of a manually operated mixer valve locally mounted.

The hot tub will be a 10 jet air system with integrated L.E.D lighting and is controlled by pneumatic air switches mounted on the perimeter.

464 Hot Tub components & Assy MCA Large Yacht Code 2

Any spa tub has to be emptied before vessel gets underway in under 3 minutes. Emergency dump valves shall be provided within the jacuzzi.

Crew will have to made aware through SOP

465 Wet Bar Assy & Components

As standard, the Yacht will provided with a Wet Bar sited on the flybridge deck. It shall be manufactured of GRP construction and will be suitable for use whilst at anchor or alongside. Integrated into the bar as standard shall be:-

- Ice maker with separate charcoal filter
- Small sink & Tap with hot and cold water
- 100 Litre refrigerator.
- Griddle
- Small Storage Locker
- Stone finished surface from the Sunseeker standard range
- Shallow raised glass bar top (with up lighting)
- 4 x Stainless steel bar stools (fixed)

Final component type and quantity shall depend upon the final specification.
See section 788 for details of White Goods

466 - Teak & Deck Coverings (34 - Confidential)

Teak Forepeak deck area

466 - Teak & Deck Coverings (34 - Confidential)

Teak Skydeck

466 - Teak & Deck Coverings (34 - Confidential)

Sky Deck Teak Decking

466 Teak and Deck Coverings

Exterior decks shall be laid with teak planking as standard with the exception of the Foredeck anchor area and the Sky Deck which will be a white non-skid surface. Thickness of teak used is determined by the effect of weight and is scheduled as follows:-

Main Deck	12mm
Upper Deck	9mm
Bathing Platform Slats	20mm
Staircase Treads	12mm
Sky Deck	*6mm (Optional)*
Forepeak	*12mm (Optional)*

471 Safety & Lifesaving

Sunseeker's standard safety equipment list for a Pleasure vessel shall all be in accordance with Classification requirements and reflected on the Yachts Safety & Lifesaving Plan.

Fire Extinguisher's :
10x 6 Kg Dry Powder Fire Extinguisher
3x 9 Litre AFFF Foam Fire Extinguisher
1x 2 Kg CO2 Fire Extinguisher
2x 5 Kg CO2 Fire Extinguisher

Firefighting Equipment :
1x Fire Blanket (One per cooking area)
1x Fireman's Axe

Pyrotechnics and Signalling Equipment :
1x Hansson Ikaros Line Thrower
6x Hansson Ikaros Rocket Flares
1x Flare Storage Canister
1x Stainless Steel Ship's Bell

Navigational and Communication Equipment :
1x Simrad EP 50 EPIRB
1x Weem's and Plath Barometer (Chrome or Brass finish as specified)
1x Weem's and Plath Clock (Chrome or Brass finish as specified)

Personal Protection Equipment :
SOLAS approved Adult Foam Lifejacket (One per berth)
2x SOLAS approved Child's Lifejacket

Liferaft Equipment :
2x 10 Person Zodiac SOLAS A' Liferafts (For more than 20 crew / passenger's a larger raft would need to be specified)
2x Liferaft fixing assemblies including Chock's, Lashing Straps and Hydrostatic Release Units.
2x Sunseeker Faux Liferaft Canisters

(Should the client not wish to specify additional Liferafts. It is stressed to the client that faux canister's ARE NOT a Lifesaving device)

M.O.B and Rescue Equipment :
2x 2 Kg SOLAS Lifebuoy's
2x 4 Kg SOLAS Lifebuoy's

471 Safety & Lifesaving MCA Large Yacht Code 2

Sunseeker's 'MCA LY2' safety equipment for this vessel. **This list shall superceed the standard 471 Safety & Lifesaving Equipment** listed in this Technical specification. All equipment to be in accordance with classification requirements.

Fire Extinguisher's :
10 x 6 Kg Dry Powder Fire Extinguisher
6 x 9 Litre AFFF Foam Fire Extinguisher
1 x 2 Kg CO2 Fire Extinguisher
4 x 5 Kg CO2 Fire Extinguisher

Firefighting Equipment :
2 x Fireguard Fireman's Outfit
2 x Drager PA 91 Breathing Apparatus Set
2 x Drager Panorama Breathing Apparatus Mask
4 x Drager 6 Litre 200 Bar Steel Oxygen Cylinder's
2 x Wolf TR 24 ATEX Fireman's Torches
2 x Steel Cored Fireman's Safety Line
2 x Fireman's Axe
1 x Spare AFFF Solution
Fire Blanket (One per cooking area)

Pyrotechnics and Signalling Equipment :
4 x Hansson Ikaros Line Throwers including spare Rocket's and Ignitor's
6 x Hansson Ikaros Rocket Flares
2 x Hansson Ikaros M.O.B Smoke and Light Signals
1 x Flare Storage Canister
1 x Stainless Steel Ship's Bell (Can be engraved with Ship's name if specified)
1 x Anchor Ball, 30 cm Plastic
3 x Signalling Ball, Canvas
1 x Signalling Diamond, Canvas
1 x Waterproof Searchlight

Navigational and Communication Equipment :
1 x Simrad EP 50 EPIRB
2 x Simrad AX 50 GMDSS VHF Handset's including NICAD Batteries
2 x Simrad LITHIUM Batteries for AX 50 Handset
2 x Simrad Trickle Charger's for AX 50 Handset
1 x Simrad SA 50 SART
1 x Weem's and Plath Clock (Chrome or Brass finish as specified)
1 x Weem's and Plath Barometer (Chrome or Brass finish as specified)

Personal Protection Equipment :
SOLAS approved Adult Automatic Lifejacket (One per berth plus two additional)
2 x SOLAS approved Child's Lifejacket
Wessex Immersion Suit (One per Berth)
Drager Parat C' Smoke Hood (One per berth)

Liferaft Equipment :
4 x Zodiac 10 Person SOLAS A' Liferafts (For more than 20 crew / passenger's a larger raft would be specified)
4 x Liferaft fixing assemblies including Chock's, Lashing Straps and Hydrostatic Release Units.

M.O.B and Rescue Equipment :
1 x Avon R 340 Rigid Inflatable Rescue Boat with White Tubes
1 x Honda 15 HP 4 Stroke Outboard Engine
1 x Fuel Storage Locker
1 x Atlas Carbon Fibre Davit Crane
1 x Rescue Boat Lifting Harness

2 x 2 Kg SOLAS Lifebuoy's
2 x 4 Kg SOLAS Lifebuoy's
1 x Pilot Boarding Ladder
1 x M.O.B Rescue Sling including Lewmar Block, Tackle and 20 metre braided line
2 x Ocean Rescue Line

Rescue Boat Grab Bag :
1 x Waterproof Grab Bag
1 x Buoyant Bailer
1 x Floating Signal Whistle
1 x Category C' First Aid Kit in Waterproof Pouch
1 x Rescue Quoit with 30 metre line
1 x 1 Kg Dry Powder Extinguisher
1 x Buoyant Safety Knife
2 x Bailing Sponges
1 x Telescopic Boat Hook
1 x Collapsible Bucket
1 x Bellows
1 x Thermal Protective Aid
1 x Floating Rescue line, 30 metre
1 x Plastimo Iris 50 Handheld Compass
1 x Waterproof Handheld LED Torch
1 x Waterproof Searchlight
1 x Drogue

Publications and Notices :
2 x SOLAS No.1 Poster
1 x SOLAS Lifesaving Training Manual
1 x Fire Safety Operations Manual
1 x Fire Training Manual
1 x GMDSS VHF Card
1 x MARPOL Garbage Disposal Poster

Medical Equipment :
1 x Sunseeker Medical Kit (Category A' minus prescription drugs)
1 x Oxygen Therapy Set
1 x Neil Robertson Stretcher

Miscellaneous Equipment :
1 x SOPEP Spill Kit
1 x RINA Fire Bucket
1 x Telescopic Ladder for mast access.
1 x Complete IMO Labelling Set.

490 - Antifouling / Hull Coating / Spraying (34 - Confidential)

Black Antifoul in lieu of standard

490 Antifouling & Spraying

The Antifouling application (approximately 270 square metres) shall consist of grey Gelshield 200 epoxy Primer (135 microns) and Trilux 33 Antifouling (240 microns) applied by airless spray application. This is suitable for a maximum of one year and must be replaced annually. Upgraded antifouling options are available.

It is the Clients responsibility to ensure the correct maintenance is adhered to for the hull antifouling. Loss of performance and increased fuel consumption can be expected if the antifouling is not maintained and kept free of marine growth.

501 - Main Engines (34 - Confidential)

Engines - 2 x MTU 12V 4000 M93 (3180PS)

501 Main Engine(bracket&mount)

The main propulsion is to be provided by two marine diesel engines driving through two flange mounted marine reverse reduction gearboxes (Reduction Ratio circa 3.2:1). All equipment will be fitted to the manufacturers recommended instructions.

10.10.2012 - ITEM BELOW ADDED

Approved diesel fuels for MTU engines are to be used.
Diesel fuels to be supplied in accordance with DIN EN 590

For further information refer to MTU documentation "Fluids and Lubricants Specifications"
MTU Code A00161

This is available on request from Sunseeker Sales.

502 Main Engine Power take off

Engine / transmission power take offs (PTOs) are fitted depending on engine and hydraulic options requested.

506 - Engine Control Systems (34 - Confidential)

Wing station controls on each outboard side of wheelhouse deck

506 Engine Control System

Sunseeker will only supply the engine manufacturers approved engine control systems. The standard specification will include:-

- 1 x MTU Blueline RCS5 Duo Engine control lever located in the Wheelhouse
- Local Operating Panel (L.O.P) in the machinery space, giving control of ahead and astern
  propulsion and throttle (1 x Port and 1 x Starboard)
- 1 x Manual Control Unit for Docking Manoeuvres (MTU Installation Only) This unit will provide engine speed control (limited) and gearbox clutch AHEAD/NEUTRAL/ASTERN. The unit comes with an 8m connecting cable and on/off functionality
- 1 x IP rated connection point with plug connector for manual control unit in the Wheelhouse

- *Optional Additional connection points are available.*
- *Optional Wing Stations are also available*

510 - Gearboxes (34 - Confidential)

Auto Troll option for Transmissions

510 - Gearboxes (34 - Confidential)

Trailing for engines, providing ability to run on one engine if necessary

510 Gearbox(brackets,av mouns)

Two gearboxes manufactured by ZF Marine Propulsion will be close coupled to the engine specified, the output shaft will have an 8 deg inclination. They shall be electronically operated through the engine manufacturers control system.

The standard transmission installation shall include: -

- Hydraulic clutches and propeller thrust bearing
- Resilient gearbox mounts
- On-gearbox sensors and wiring (Interfaced into the engine manufacturers control system)
- Connecting parts for oil extraction and oil cooler
- Trailing Pumps (used to supply oil pressure for gearbox lubrication during “windmilling” situations,
  this may include running on one engine or when under tow)

Auto-Troll is available on this gearbox. This will be a client upgrade.
Auto-Troll is used for slow speed manoeuvring and is controlled by the engine manufacturers control system.

*Auto-Troll must be specified at the time of selecting the engine package otherwise significant financial penalties will incur for late fitment.

523 Propellers

The propellers are manufactured of NIBRAL, a bronze, nickel and aluminium alloy. They are designed and manufactured by Rolla, to ensure optimal working conditions at all speeds of the vessel, without overloading the engines and to ensure as much as possible a vibration free operation.

The propellers are fixed blade, shall be outboard turning, designed to give the craft the required speed with minimum efficiency loss and /or cavitation characteristics.

The propeller tail shaft and hub of the propellers are tapered with a woodruff type key and the fitting of the propellers is conducted under stringent Sunseeker Quality controls and in accordance with Classification requirements.

531 PropShafts, Coupling's & P Bracket's

The Yacht shall be fitted with two shaft lines consisting of shafts, bearings and couplings (water lubricated) sized accordingly for the engine installation.

- The propellor shafts are manufactured from DUPLEX F51 and shall conform to classification
  requirements and are designed to avoid as much as possible sharp corners and discontinuity.
- A mild steel half coupling shall be installed for connection to the gearbox flange.
- P-brackets are to be cast in AB2 Nickel Aluminium bronze complete with water lubricated
  cutlass bearing's.
- 1x spare shaft seal will be fitted to each shaft for emergency use.

541 Rudders,Tillers, Steering

The rudder blade, rudder-stock and tiller arms are to be NIBRAL and manufactured / tested to Classification requirements.

The steering system is to be an electro/hydraulic steering system which can be operated by a manual hydraulic helm in an emergency situation from the steering gear flats. See section 665 for full description of steering system.

541 Rudders,Tillers, Steering MCA Large Yacht Code 2

The Auxiliary steering gear is to be independent of that of the main steering gear. If steering systems can also be operated from other positions in addition to the wheelhouse, then two-way communication will be arranged between the bridge and these positions and include a rudder angle indicator.

551 Trim Tab Fabrication

The primary function of the trim tabs is to correct windage on the vessel whilst underway, in different sailing conditions.

Trim tabs shall be constructed of a marine grade stainless steel and shall operate through two hydraulic cylinders simultaneously per trim tab, powered from the Yachts auxilary hydraulic system. the trim tabs are controlled via touchscreen from the Tijssen M.P.A system. No monitoring of trim tab position is provided.

Sacrificial anodes, two per trim tab plate are fitted to reduce the possible action of electrolysis.

561 - Thruster Machinery (34 - Confidential)

Hydraulics - Stern thruster - Hydraulic (65hp)

561 Thruster Machinery

One 20" internal diameter 100 horsepower hydraulic BOW thruster will be situated in a 20" GRP bow tunnel.

The thruster will be powered with a 90cc bent-axis hydraulic motor turning at approximately 2000 RPM at full power.

The hydraulic system working pressure will be circa 3000 psi.

Hydraulic direction and flow will be controlled by a proportional directional valve assembly situated close to the thruster tunnel.

The unit will be operated using a single lever proportional speed joystick mounted at the main helm control panel.

One 16" internal diameter 65 horsepower hydraulic STERN thruster is available as a Client specified option and must be specified below.

571 - Stabiliser Machinery (34 - Confidential)

Hydraulics - Trac Star 440 Digital fin stabiliser system (zero speed and underway stabilisers)

571 Stabiliser Gear Machinery

Stabilisation is available as a Client specified option and must be specified below.

Combined dynamic (stabilisation underway) and zero speed stabilisation (stabilisation at anchor) can be fitted to this vessel.

This system will be set to provide optimum dynamic stabilisation at cruising speed.

The two 2.6m^2 stabilisation fins will be mounted external to the hull side and be non retracting.

Note that zero speed stabilisation requires substantial mechanical power and as a result the **standard generators must be upgraded**.

The Captain may be required to operate both generators in order to continue to provide sufficient electrical power to the vessel, while supplying sufficient mechanical power for the zero speed facility.

This will depend on the vessels electrical requirement at the time and the final specification.

596 Tools & Toolboxes

No tools or toolboxes are supplied as standard.

600 Systems

All system pipework will be fitted to the sizes and materials as specified to conform to Classification Society Requirements and detailed on diagrammatic system drawings. They will be adequately secured to prevent 'looping' and all runs will be as direct as possible, avoiding sharp bends and drains. All essential systems main pipe runs are metallic, and these pipe runs are secured using rubber lined brackets. Scuppers to have a constant fall, and to be of suitable size to conform to Classification Society Requirements.

- Piping systems shall have be colour coded throughout all serviceable areas and manifold valves clearly labelled for service and operation.

- All pumps and equipment will be flexibly mounted but adequately secured to the structures and fitted in accessible positions, as detailed on the machinery drawings.

- All resiliently mounted equipment to have flexible hose connections of at least 2 diameters between rigid piping and equipment, subject to Classification limitations.

- All piping and tank systems shall be hydrostatically pressure tested during the build. The results of the testing will be recorded and held by the yard.

- Systems that require venting to the atmosphere will be routed to cause least disruption to living spaces and be sited according to classification rules.

600 Systems MCA Large Yacht Code 2

All sea inlet and overboard discharges will be provided with efficient shut-off valves arranged in positions where they are accessible.

Overboard discharges will be kept to a minimum and be located as far as practicable, above the full load waterline. Overboard discharge pipes will be of a solid type to a set distance below the weather deck.

610 - Black Water System (34 - Confidential)

Sewage Treatment Plant - interfaced to Tijssen System

610 Black Water System

All sewage, from the Tecma 24V macerating toilets installed on the vessel, will be pumped into a 1450 litre integral black water holding tank. The black water tank shall be fitted with a permanently open vent line to the Sky Deck, fitted with a carbon filter. There is also an inspection hatch for cleaning and servicing purposes.

The Black Water tank can be drained in two ways:

1. When a shore side facility is available, the tank can be drained directly via the IMO compliant deck connection supplied.
2. For discharge of raw sewage at sea 1 x discharge/macerator pump rated at 380V A.C 3 Phase, capable of discharging circa. 140 l / min is provided. **Strict adhesion to MARPOL 73/78 Annex IV for discharge regulations at sea is required for this action.**

    - For redundancy, both grey and black tank discharge pumps can be selected to draw from either grey or black tanks in the unlikely event of a pump failure.
    - Tank Monitoring – Ultrasonic fluid level sensing of the tank level will be full range with

multiple alarms

- Piping – ABS plastic pipe and flexible sanitation hose will be used throughout the system.

  Sizing varies from 3'' to 1.5''. 90 elbows shall be kept to a minimum and where possible,

  substituted for two 45 degree fittings.
- Valves – All valves are of full flow ball type. These are all, except for one, manufactured from

  ABS plastic. In way of the deck pump out, a bronze bodied valve is fitted.

Optional sewage treatment plants are available by request.

610 Black Water System MCA Large Yacht Code 2

To comply with MARPOL 73/78 Annex IV, all sewage discharges whether to sea or shore based facilities are to be recorded in a sewage record book with indication of date, location and quantity of sewage discharged. If the sewage is discharged to sea, the records are to include information on the vessel speed and distance to the nearest land. The sewage record book is to be kept on board for at least 36 months and made available during periodical surveys.

Procedures covering the following are to be available on board:

- Sewage management including discharge criteria and use of holding tanks in port and no discharge areas;
- Preparation, filling and maintenance of the sewage record book;
- In order to verify compliance within the allowable limits, Periodical analysis of samples of the effluent, at least every 12 months, of. The analysis is to be performed by a recognized laboratory and documentation is to be kept on board for at least 36 months and made available during periodical surveys;
- Disposal of sewage treatment plant residues ashore or by incineration.

Sea Area	**Discharge Criteria**
Within 4 nautical miles from land	**No discharge** except from an approved sewage treatment plant certified to meet regulations 3(1)(a)(i) and 8(1)(b)
Between 4 and 12 nautical miles from land	**No discharge** except either:- (1) from an approved sewage treatment plant certified to meet regulations 3(1)(a)(i) and 8(1)(b); or (2) from an approved system for comminuting and disinfecting sewage meeting regulations 3(1)(a)(i) and 8(1)(a).
More than 12 nautical miles from land	**Discharge** from either (1) or (2) above; or Sewage which is not comminuted or disinfected when the ship is proceeding at not less than 4 knots

	And the rate of discharge is approved by the Admininstration.

615 - Fresh Water System (34 - Confidential)

Flybridge high pressure water misting system installed on underside of radar arch (8 outlets)

615 - Fresh Water System (34 - Confidential)

Water softener for domestic water system

615 Fresh Water System

Fresh Water is stowed in an epoxy coated integral GRP tank. A connection point is provided at the stern of the yacht for fresh water bunkering.

Please note that operating the vessel in warmer climates will increase the ambient temperature of the fresh water stored in the onboard tanks.

1 x Duplex water pressure system (380VAC) comprising of 2 x Self-priming pumps - capacity (each) circa 100 lt/min - open flow at a 10m head. Mounted on a common frame c/w inlet/discharge manifolds. Pressure gauge, frequency drives & control panel

2 x 200 litre hot water cylinders, each fitted with 3 x 2kW immersion heaters shall be fitted within the machinery space. An expansion vessel of suitable size shall be also fitted in a location depicted at time of installation.

The hot water circuit shall be arranged as a ring main throughout the lower and upper decks of the yacht. The ring main shall be fitted with a permanently running (A.C.) circulating pump located in close proximity to the hot water cylinders. The main run shall be in circa 25mm dia. I.D. pipe with standard bore lines to all accommodation, galley supply lines and external faucets.

The cold-water circuit shall be arranged as a single main run (not a ring main) through the length of the yacht. The main run shall be in both 25mm dia. I.D. and 32mm dia. I.D. 316 stainless steel pipe with standard plastic bore lines to all accommodation, galley supply lines and external faucets.

A dockside connection with a pressure regulator is also provided to supply the Yacht's fresh water system with water directly from the dock, without the need to operate the Yachts fresh water pumps. Please note this connection point will not fill the fresh water tanks.

Cold Fresh water deckwash outlets are also provided and would be located in the following areas

1 x Aft Service Locker
1 x Upper Deck Aft Cockpit
1 x Sky Deck
1 x Forepeak

Reverse osmosis desalination system – 1 x Idromar MC3S (6000 litre capacity per 24 hours) will be installed as standard. This rating is based on average seawater salinity 35000 ppm and temperature range min. 33oF / .5oC max. 122oF / 50oC. As standard, the desalination plant is fitted beneath the crew sole in the fwd service area. This is to maintain a low operating temperature and minimise the noise disturbance to guest accommodation.

615 Fresh Water System MCA Large Yacht Code 2

A chlorine-dosing unit, for disinfection of the ships potable water supply, shall be fitted to the Fresh water system.

620 Grey Water System

A waste water (grey water) gravity drained system shall be fitted to all showers, baths, wash-basins and galley services on upper decks and, will drain into a 1350 litre epoxy coated integral GRP holding tank.

All lower deck shower rooms, galley and laundry services shall drain to 240V Tecma waste water pumping units before being transferred automatically into the grey water holding tank.

For discharge of grey water directly into the sea, 1 x discharge/macerator pump rated at 380V A.C. capable of discharging circa. 160 l / min is provided. This pump may be operated manually or set to discharge automatically upon reaching a certain set volume.

- For redundancy, both grey and black tank discharge pumps can be valved to draw from either grey or black tanks in the unlikely event of a pump failure.
- Tank Monitoring – Ultrasonic level sensing of the tank level will be full range with multiple alarm points
- Piping – ABS and Metallic pipe work to be installed under floor with ABS and flexible connections where required.
- Valves – All valves are of full flow ball type. These are either manufactured from ABS plastic or bronze.
- All discharges (where possible) are to be fitted with 'Combi-Siphon' air admittance water traps.
- The integral grey water tank will be fitted with a permanently open vent line to the mast fitted with a carbon filter. The tank has access for inspection.

Note:
The grey water line passing through frame 2 has an additional valve on the aft face to comply with RINA Commercial regulations for collision bulkheads. This pipe must have a wall thickness no thinner than 7mm at the penetration of frame 2.

625 Heating & Ventilation Sys.

Engine Room Ventilation
The engine room ventilation system is based on an outside air temperature of 25°C. The main engines will draw their combustion air direct from the engine room via the main engine supply air filters. Four electrical supply fans are fitted at high level, within the engine room, and shall be installed with suitable ducting; air will be vented overboard through plenums and grills. All fans will be variable speed and reversible through control on the MPA.

Each fan is capable of delivering 165 m^3 of air per minute. All fans are to be capable of shut down from the fire control lockers port and starboard. All inlet and outlet ventilation ducts will be fitted with A60 approved marine fire dampers, which are also operable from the fire control safety locker. Air inlet ventilation ducts shall be fitted with water separators/mist eliminators

Accommodation Ventilation
All bilge & technical areas (lower floor areas) are connected to extraction fans. Bathroom, toilets and laundry areas will have suitable air extraction via single or multiple fan units. Galley & hob extraction will be independent of any other extraction. All fans will allow for adequate air changes.

625 Heating & Ventilation Sys. MCA Large Yacht Code 2

Ventilation fans from machinery spaces are to be capable of being stopped, and main inlets and outlets of ventilation systems closed, from outside the spaces being served.

The Main Galley extractor fan to comply with classification must be vented independently and be constructed of 3mm wall Metallic ducting and incorporate approved fire dampers. Such Fire damper must be manually operable from outside the galley space.

630 - Air Conditioning System (34 - Confidential)

Air Conditioning air handler upgrade to quieter running AHDC units

630 - Air Conditioning System (34 - Confidential)

Air Conditioning upgrade to Tropical specification

630 - Air Conditioning System (34 - Confidential)

Air Conditioning upgrade to include 2 x Air Handlers in Engine Room

630 Air Conditioning System

All accommodation spaces including the wheelhouse and galley to be fully air-conditioned with a chilled water circulating system with reverse cycle heating to give the following states:

SUMMER	
Outside	Air 30º C - 35º C and 80% relative humidity.
Inside	Air 20º C - 25º C and 55% relative humidity.
	Seawater Temp 25º C
WINTER	
Outside	Air 0º C.
Inside	Air 25º C.
	Seawater Temp 10º C

In addition to the accommodation spaces, the main switchboard compartment will also have sufficient air conditioning.

Modular chilled water units will serve the system with a capacity capable of serving all lower, main, and upper deck accommodation. Capacities of the chilled water system will depend upon the yachts final destination and any options required. The condensate produced from the air handlers will be drained directly into the grey water tank.

Chillers operated by a 'Chilled Water Master Controller', providing central control for all chillers in heating and in cooling, as well as operation of seawater and chilled water pumps.

Each area / cabin shall have room mounted variable speed air-handling units with individual cabin controls and full display in each area. All air-handling units will be positioned such that serviceability and filter removal are easily achieved. All ducting together with return and supply air grills will be sized in accordance with Marine Air recommendations.

The main chilled water loop will be an insulated Stainless Steel piping system with connections to air handlers via plastic plumbing pipe work and components. The Sea water loop will be sized in accordance with Marine Air recommendations using a 90/10 Copper-nickel alloy grade material or equivalent and may incorporate flexible marine grade hose if necessary.

630 Air Conditioning System MCA Large Yacht Code 2

To comply with the Regulations, fresh air make should be provided in each of the crew and guest sleeping cabins.
2 x 24,000 BTU Fresh Air Make-up units shall be provided.

635 Fire Hydrant System

Fire Hydrant Arrangement
Two pumps will supply 4 fire hydrants positioned to ensure coverage of all areas of the vessel. Fire fighting equipment (water) will be provided at fire hydrant points (sited in fire lockers) and will have fire hoses and nozzles with instantaneous connections local valves.

Primary fire pump 'A' - located in the engine room will draw raw water from the main sea chest in the machinery space.

The secondary fire pump 'B' - located in a dedicated pump room (built as a watertight compartment) aft of the machinery space will draw raw water from an independent seawater inlet located in the stern beneath the garage.

Fire Pumps
Primary fire pump 'A' - centrifugal type - 400 V A.C 5.5 kW 50/60Hz 3 phase. - self-priming
This pump will have a capacity of circa 45m3 / hr (approx 12.5 l / sec) @ 10m head

Secondary fire pump 'B' – centrifugal type – coupled to a manual start diesel engine
This pump will have a capacity of circa 40m3 / hr (approx 11 l / sec) @ 10m head

Pipe for all above systems to be 90/10 Copper-nickel alloys, press fitting type.

Modification made by Jared Hall 13.10.11

Fire Hydrant Arrangement

In total there are 5 fire fighting and bilge suction pumps supplying 4 fire hydrant points positioned to ensure coverage of all areas of the vessel.

These pumps are as follows...

- **PUMP A - (AC Powered) - Quantity 2** - (Primary fire fighting and primary bilge suction) - Both pumps are located within the engine room.

Specification - Centrifugal type - 400 V A.C 5.5 kW 50/60Hz 3 phase. - self-priming. This pump will have a capacity of circa 45m3 / hr (approx 12.5 l / sec) @ 10m head

These pumps draw water from the main engine room sea chest auxiliary manifold.

- **PUMP B** - **(Diesel Driven) - Quantity 1** - (Used as secondary pump for either fire fighting or bilge suction) - Located in pump room.

Specification - Diesel driven delivery min - 40m3/hour @ 10m head - self priming - coupled to manual start diesel engine - max discharge pressure 2.5 BAR - Max flow rate 46m3/hr

This pump draws raw water from the AFT end pick up just forward of the transom.

- **PUMP C - (Engine Driven) - Quantity 1** (Used as additional engine room bilge pump) - Located in Engine room on STBD engine

Specification - Delivery min. 18m3/hour @ idle (650 RPM) - Operated manually from switch next to pump or via MPA system.

- **PUMP D - (AC POWERED ATEX RATED) - Quantity 1** - General garage bilge extraction - Located on hull topside of garage STBD side

Specification - Delivery min 20m3/hour adequote to sustain deluge rate - self priming 400V / 3phase / 50Hz - 2.2KW

Fire fighting equipment (water) will be provided at fire hydrant points (sited in fire lockers) and will have fire hoses of 18m length and nozzles with instantaneous connections local valves.

Pipe for all above systems to be 90/10 Copper-nickel alloys, press fitting type.

640 Bilge System

Bilge Arrangement

A bilge discharge system driven by pump 'A' located in the machinery space and pump 'B' located in a dedicated pump room (built as a watertight compartment) aft of the machinery space. This room can be accessed via the machinery space, tender garage or via a deck hatch. These pumps will draw from bilge manifolds also located in the machinery space and in the pump room and will discharge overboard.

The machinery space is fitted with three bilge suctions. One connected to the engine driven pump 'C'. One connected to the bilge manifold and one direct to the bilge pump (A). All remaining bilge suctions are connected to the bilge manifold in the pump room.

The garage space is fitted with two bilge suctions. One connected to an ATEX rated pump 'D' and one connected to the manifold located in the dedicated pump room. This suction is only to be used in case of emergency and is normally locked shut.

Each bilge suction shall be fitted with a detachable and easily cleaned strum box.

Bilge Pumps

Primary bilge pump 'A' : centrifugal type 400 V A.C 5.5 kW 50/60Hz 3 phase, self priming - located in pump room. This pump will have a capacity of circa 45m3 / hr (approx 12.5 l / sec) @ 10m head

Secondary bilge pump 'B' – centrifugal type – coupled to a manual start diesel engine. This pump will have a capacity of circa 40m3 / hr (approx 11 l / sec) @ 10m head.

Machinery space emergency bilge pump 'C' - engine driven, self-priming – located on the front of the port main engine. This pump will have a capacity of circa 7.2m3 / hr (approx 2 l / sec) at 1000rpm

Garage space bilge pump 'D' – 400 VAC 2.2kW 50/60 Hz 3 phase, self priming. This pump will have a capacity of 10m3 / hr @ 2m head.

Piping for classification will be 90/10 Copper-nickel alloys, press fitting type.

The owner/captain of the yacht should be reminded that they are responsible for retention of any oily water and oil residues onboard **and** the disposal of same ashore by recognized means – shore side tanker or the like.

Modification made by Jared Hall 13.10.11

Bilge Arrangement

The vessel is compartmentalised into FWD under accommodation spaces, engine room, pump room, above garage floor and under garage floor.
Bilge suction pick up's in these areas are connected to two bilge manifolds located within the watertight pump room.

Bilge water can be pumped from these manifolds using either the Primary bilge pump (Pump A - located in the engine room) or the secondary bilge pump (Pump B - located inside the pump room). Both these pumps discharge directly overboard via the FWD STBD discharge stack and a skin fitting in the lower rub rail each respectively.

Engine Room Bilge Suction

The machinery space is fitted with three bilge suctions. AFT MID and FWD.
The AFT is connected to the bilge manifold in the pump room, the MID is connected directly to the primary bilge pump (Pump A) and the FWD most is connected to the engine driven pump on the STBD engine.

Garage Suction

The garage is divided into two watertight areas, above and below floor. The above floor bilge water is removed with bilge pump (Pump D). This ATEX rated pump draws from the AFT most point of the garage floor and discharges through a skin fitting on the STBD side.
The below floor bilge suction is taken to the pump room bilge manifolds where either of the engine room bilge pump (Pump A) or the diesel driven pump (Pump B) discharge overboard.
Additional bilge suction of the above floor space can be taken directly from the pump room bilge manifold. This is only in case of emergency. The ball valve is locked shut.

Pump Room

The pump room itself has a bilge pick up connected directly to the bilge manifold. This room can be accessed via the machinery space, tender garage or via a deck hatch.

Each bilge suction shall be fitted with a detachable and easily cleaned strum box.

In total there are 5 fire fighting and bilge suction pumps supplying 4 fire hydrant points positioned to ensure coverage of all areas of the vessel.

These pumps are as follows...

- **PUMP A - (AC Powered) - Quantity 2** - (Primary fire fighting and primary bilge suction) - Both pumps are located within the engine room.

Specification - Centrifugal type - 400 V A.C 5.5 kW 50/60Hz 3 phase. - self-priming. This pump will have a capacity of circa 45m3 / hr (approx 12.5 l / sec) @ 10m head

These pumps draw water from the main engine room sea chest auxiliary manifold.

- **PUMP B** - **(Diesel Driven) - Quantity 1** - (Used as secondary pump for either fire fighting or bilge suction) - Located in pump room.

Specification - Diesel driven delivery min - 40m3/hour @ 10m head - self priming - coupled to manual start diesel engine - max discharge pressure 2.5 BAR - Max flow rate 46m3/hr

This pump draws raw water from the AFT end pick up just forward of the transom.

- **PUMP C - (Engine Driven) - Quantity 1** (Used as additional engine room bilge pump) - Located in Engine room on STBD engine

Specification - Delivery min. 18m3/hour @ idle (650 RPM) - Operated manually from switch next to pump or via MPA system.

- **PUMP D - (AC POWERED ATEX RATED) - Quantity 1** - General garage bilge extraction - Located on hull topside of garage STBD side

Specification - Delivery min 20m3/hour adequote to sustain deluge rate - self priming 400V / 3phase / 50Hz - 2.2KW

The owner/captain of the yacht should be reminded that they are responsible for retention of any oily water and oil residues onboard **and** the disposal of same ashore by recognized means – shore side tanker or the like.

640 Bilge System MCA Large Yacht Code 2

Bilge alarms need to be Audio and Visual in the wheelhouse area and the crew area.

Bilge pumping system must be built to the approved drawings only.

Note:
The forward bilge suction line has an additional valve on the aft face of frame 2 to comply with RINA Commercial regulations. The suction line wall thickness must not be thinner than 7mm at the penetration of frame 2.

645 Fire Suppression&Detection

The accommodation areas of the yacht are to be fitted with both heat and smoke detector alarms and the machinery spaces with heat detector alarms. The primary fire detection system panel is located in the Wheelhouse and is also connected to the MPA system to repeat any given fire alarm on all MPA screens.

The fixed fire fighting system shall be a Seafire FM 200 engineered system with a capacity to extinguish a fire within the engine room compartment only. The FM 200 cylinder will hold 97 kg of agent suitable for an engine room net volume of 128 m^3.

The system will comply to Classification society requirements.

Hand held fire extinguishers are fitted in all accommodation and machinery spaces with a fire blanket in the galley. (See section 471). The final locations of fire extinguishers will be detailed on the current Yachts Safety Plan.

645 Fire Suppression&Detection MCA Large Yacht Code 2

Fire suppression is to be built to approved drawings only. It shall be a FM200 approved system with manual shut down is required for the engine compartment.

MCA approved fire fighting equipment including suits are required. Standard storage location is the fire / safety locker.

650 - Fuel System (34 - Confidential)

Alfa Laval fuel cleaning centrifuge (single unit)

650 Fuel (petrol&diesel) Sys.

Diesel Oil

Fuel is stored in bunker tanks integral with hull structure. Both main propulsion engines and generators draw fuel independently from a daily service tank and return via a common manifold. This tank shall be replenished, via transfer pump(s) from the bunker tank(s). The AC transfer pump can be set to automatically replenish the daily service tank, activated at preset levels from the tank level sensors and is capable of transferring circa 45 l / min of fuel. The operating parameters are set via the Tijssen MPA. In the event of failure there is a hand operated pump.

On bunkering, fuel passes through a tank-viewing port into the filling and transfer manifold located on the forward engine room bulkhead. This provides visual inspection during fuel bunkering ensuring safe filling procedures. The two filling stations (one port one starboard) are fitted with a 60mm O.D. Camlock connector for filling and an 85.9mm I.D. Camlock connector for venting. The Camlock covers of both are connected together ensure correct venting on bunkering.

- Fuel filling to the bunker tanks and daily service tank is gravity fed.
- Daily service tank and bunker tanks are fitted with Kubler tank level sensors and level alarms.
  In order to ensure compete compatibility of the system. The M.P.A is set to alarm when fuel
  is at high level
- Cascade (overfill) line's are fitted between all tanks.
- All tanks have inspection hatches and baffles. The baffles have removable sections, which allow
  access to all areas of the fuel tank for periodic cleaning and inspection.
- Tanks will have a permanently open vent to the main navigation mast with gooseneck and
  removable flame arrestor gauze.
- The fuel piping is either stainless steel 316 or 304 or steel with flexible Parker hydraulic hose
  for short lengths and flexible couplings to all pumps and tank lid connections. All fuel oil
  pipework shall conform to Classification Society requirements.
- Pipe runs will be assembled using either stainless or steel where possible, some connections
  will require short sections of high-pressure flexible fuel hose.
- The Fuel Oil supply lines to the engines and generators from the Daily Service Tank are each

fitted with emergency quick closing valves. These are manually operated from the fire control
locker in the event of fire.

- The maximum recommended filling rate is up to 300lt per min
- The vessel shall also be fitted with a Separ FPS210 Fuel Polishing Unit. This will allow fuel to be cleaned and re-circulated in the event of contamination but can also be utilised to clean fuel being transferred to the Daily Service Tank. The maximum capacity of the fuel polishing unit is 700 litres per hour with clean filters.
- In the event of electric fuel transfer pump failure or loss of ships power, a hand operated pump is provided.

NOTE: All tanks should never be filled above 95%, this point is alarmed and recordable on the Marine Personal Assistant (M.P.A). This is to promote safe working practice and to limit the possibility of polluting the waters with an overflow of fuel oil

10.10.2012 - ITEM BELOW ADDED

Refer to section 501 Main Engine (bracket&mount) for specification of engine diesel fuel.

Petrol

As standard, no petrol stowage is provided. Under Classification and MCA ruling, there is a maximum permissible amount of petrol (circa 150 litres) that can be carried on board. This amount will normally include the petrol stored in any petrol powered jet ski's.

650 Fuel (petrol&diesel) Sys. MCA Large Yacht Code 2

Fuel lines to main engines and generators will be shut off via Quick Closing Valves which are manually operable from the safety/fire locker.

A fabricated waste fuel oil tank (sludge) will be provided in the engine room.

Fuel system shall be built to approved drawings only.

655 Lube Oil System

- The MTU Engines will use a categorised oil as recommended in the latest edition of the MTU Recommended Fluids & Lubricants publication at time of delivery of engine's.
- The ZF or Twin Disc transmission will use the manufacturers approved & recommended single grade oil. The oil viscosity will be determined by the yachts final destination.
- The KOHLER Generators will use an engine oil recommended and approved by Kohler at time of delivery of generators.

Exact documented details of all lube oils used during installation will be provided at time of delivery of the yacht.

An oil transfer system is provided via quick coupling connections and an electric transfer pump.

655 Lube Oil System MCA Large Yacht Code 2

Lube oil tanks will be fitted with international connections for supply and removal of lube oil.

1 x Dirty Oil tank and 1x Clean oil tank will be fitted with storage capacity for one engine oil change only.

660 Hyd. Sys. Thrusters

The central hydraulic system, provided by American Bow Thruster, will provide power for the bow thruster, 2 foredeck windlasses and 2 aft deck warping capstans.

When running each main engine turns twin Rexroth load sense hydraulic pump groups. One 45cc pump will be attached via a through shaft to one 140cc pump which will be mounted on each gearbox via an SAE – D flange. Engine idle speed will be set to 600rpm; this will produce circa 225 Bar pressure.

When the main engines are not running the system can run from one Rexroth 75cc load sense hydraulic pump powered by the vessel generator. This will give sufficient pressure and flow to operate windlass or capstan to line adjustment.

The main run of the hydraulic circuit will be constructed from zinc plated steel pipe. This is suitable for the designed hydraulic working pressures, and all metallic joints will be compression or crimped. Flexible hydraulic hose with suitable connections will connect the solid pipework to the hydraulically powered equipment and associated assemblies.

The two foredeck windlasses will be single speed hydraulically powered Muir VRC 8000.

- Hydraulic flow at maximum pull (a full Load of 1925kg) will be circa 24l/min, and pressure will be circa 130 Bar. Line speed will be circa 10m/min.
- Hydraulic flow at 75% pull (a load of 1464 kg) will be circa 35l/min, and pressure will be circa 98 Bar. Line speed will be circa 15m/min.
- Line speed will be circa 18m/min with no load. Drum speeds will be the same in either direction.

The two aft deck capstans will be single speed hydraulically powered MUIR VC6000.

- Hydraulic flow at maximum pull will be circa 28l/min, and pressure will be circa 140 Bar. Line speed will be circa 10m/min.
- Capstans will only rotate in one direction for warp control.

Control will be local to both windlasses and capstans. Activation of the thruster panel will also provide pressure and flow for all the units.

The bow thruster, 1 windlass and 1 capstan will operate at full thrust / pull with both main engines running.

There will be two hydraulically driven seawater-cooling pumps. These will only operate when flow is circulating in the system. One pump will be valved on-line at all times and the other will be valved over at selected service intervals. In normal operation only one pump is required. The seawater flow rate through the heat exchanger will be circa 42 l/min.

665 Hyd. Sys.Steering

Changes made by G. May (1/11/11) to reflect the Wills Ridley system (previous text described the Hydrive system)

The steering system will operate via a dedicated electro/hydraulic power pack. The main components of which are located in a separate gas tight compartment within the garage area. This compartment also extends across the rear of the garage compartment and contains both tillers and steering rams. Hatches are provided for easy inspection of steering gear.

The system is actuated via the control panel located at the main helm. The system is operated using a wheel located on the main helm console and at the flybridge or by the function buttons on the main panel. All control between main helm position and the electro/hydraulic power pack is via hard-wired screened cable.

There is one electro-hydraulic Power Pack with 24VDC direction control valves which have manual override buttons at the end of each solenoid coil. These can be used to actuate the rudders in the event of a fault at the other steering positions. The power pack has a steel tank with maximum oil capacity of 45 ltrs. This is separated by an internal weir plate into two sections. The main side of the weir supplies the 2 speed 3 phase motor/pump. The smaller side of the weir plate supplies the 24v dc motor/pump. The fill level is above the weir level (fill level capacity is 42-44 Ltrs). The difference between the fill level and max-capacity allows for expansion / overfill and keel-over angles.

Hydraulic flow is controlled by two solenoids:
Solenoid 1 for AC motor control of either of the 2 speeds from the bridge or power pack panel for either FFU or auto pilot control.
Solenoid 2 for DC motor control from push buttons on the bridge.

The 24 VDC Power Pack will start automatically should power fail to the AC motor.

Once the system has been activated using the panel located on the vessels bridge, steering from this position can be achieved in three ways:

- Electric helm with steering wheel
- 24v steer buttons located on bridge panel
- Auto pilot, via standby and pilot buttons.

The system can be operated from the stern compartment using the steer buttons on the starter cabinet located above the power pack.

There is also a manual hydraulic helm position located in the adjacent compartment used to operate the steering system in the event of electrical failure. Communication to the bridge will be via a VHF handset and visual indication of the rudder position is given via a local reference gauge.

Hydraulic steering pipe work is of steel with short flexible hoses where necessary.

The system will be monitored at both helm positions to ensure compliance to classification where appropriate.

The system will integrate with the vessels autopilot. This is controlled via its own signal transmitted via a separate screened cable, giving yet a further level of redundancy.

670 Hyd Sys Platform,Tab,Aux

An independent auxiliary hydraulic system is provided that is located in the aft service area.

Components:

- 2 x 380VAC 3 Phase electric motor's
- Oil tank, capacity up to 100 litres depending upon equipment specified
- Tender garage door hydraulic cylinders
- Trim tab hydraulic cylinders, power up & down
- A locally mounted manual hand pump, in the event of ships power loss, can also operate the system.

The auxiliary hydraulic pack will control the following:

- Tender garage door open and close.
- Tender garage door locking pins

- Trim tabs
- Hydraulic Tender Recovery Winch
- Hydraulic Rise & Fall Bathing Platform

The auxiliary hydraulic pack shall also supply hydraulic power to the following client specified options:-

- *Optional Bulwark Balconies and locking cylinders*
- *Optional Master Stateroom Balconies and locking cylinders*

The passerelle shall be operated from it's own dedicated Hydraulic Pack provided by the passerelle manufacturer.

675 Exhaust System

Main Engine Exhaust
Exhaust gas discharges below the water level. When running at low speed a by-pass system allows exhaust gas to discharge above the water level, within the lower rub rail sections.
The dry exhaust riser, spray head assembly and by-pass section are stainless steel 316L, connected, by use of a flexible rubber connection (classified for use) to the through hull GRP discharge.

- All stainless steel exhaust parts are insulated with jackets to reduce heat radiation.
- The main engine exhaust by-pass is GRP fitted with an in-line silencer.
- All the exhaust pipes are resiliently mounted to the ships structure.

Generator Exhaust
Generator cooling water is injected into the exhaust at the engine manifold. The exhaust gases pass through approved exhaust rubber hose to a Halyard type water lift silencer and then rise to a water separator where the gas and cooling water are separated. Generator exhaust gases and cooling water are to discharge overboard separately through fittings above and below the waterline.

Port & Starboard generators are to be discharged to relevant sides to enable generators to be switched over for swimmers in water.

675 Exhaust System MCA Large Yacht Code 2

Machinery space main and auxiliary sea inlets and discharges in connection with the operation of machinery are to be fitted with accessible steel valves between the pipes and the shell plating. The valves are controlled locally and are to be provided with indicators showing whether they are open or closed.

680 Water Cooling System

Main and auxiliary engines will have a raw water-cooling system with heat exchangers, oil coolers and seawater pumps. Two seawater inlets with strainers and valves, are connected to a manifold / sea chest with crossover double flanged butterfly valves to supply main and auxiliary engines and all other auxiliary systems. One strainer can be valved off during operation and serviced underway at reduced rpm.

- All fibre glass pipe within the engine room will be Bondstrand 2000M Glass Reinforced Epoxy
- Main and auxiliary seawater inlet valves and Strainers shall be of suitable materials of construction and comply to classification society rules.

- Connections to engines, auxiliary engines and other auxiliary systems will be through flange type rubber bellows or flexible pipe with flanged fittings.

685 Scuppers & freeing ports

Scuppers shall be fitted to drain any water that is not handled by the freeing ports. Smaller scuppers shall also be fitted in all deck lockers and seating units as required.

Main deck drains will have a coarse stainless grating to prevent solids passing into the drainage system. These must be cleaned as part of the planned maintenance schedule.

The deck drainage system of the yacht is based on a normal trim angle. If the yacht angle is compromised the drainage system may not work as effectively. It is important to ensure when the Yacht is on the hardstanding, sufficient fall is provided to maintain functionality of the deck drainage.

690 - Compressed Air System (34 - Confidential)

Bauer Junior 2 Dive Compressor to be supplied

690 Compressed Air System

There is no fixed Compressed Air system fitted on board the Yacht as standard.

700 Electrical

All electrical systems are designed and installed in accordance with Classification Society standards.

All electrical equipment is selected from ranges demonstrated to be suitable for marine use. Wherever appropriate, equipment is type-approved by the relevant Classification Society.

All cables are selected from marine ranges and shall be type-approved by the Classification Society as required.

Cable support is in accordance with classification society rules and all major cable runs within the machinery space are supported on wire cable trays.

700 Electrical MCA Large Yacht Code 2

The Emergency switch board and battery bank is located out side the machinery space. The emergency batteries are loacted on the Upper Deck, outboard of t he Captains Cabin and the switchboard is located beneath the wheelhouse console. In the event of a loss of power the Navigation lights and emergency lighting will be supported these batteries.

There will be a seperate Radio communication battery bank and distribution board. This will provide power for distress communications only.

720 AC Power System

Main AC Power Supply

Boats to European Standards:

3-Phase supplies - 400 Volts 50Hz 4-wire distribution with grounded neutral.
Single-phase supplies - 230 Volts 50 Hz with grounded neutral.

Boats to US Standards:

3-phase supplies - 400 Volts 60Hz 4-wire distribution with grounded neutral.
3-phase supplies - 208 Volts 60Hz 4-wire distribution with grounded neutral.
Single phase supplies – 230 & 120 Volts 60Hz with grounded neutral.

Electrical power is supplied from two main generators. When alongside, power may be drawn from shore side connections via either an isolating transformer or optional shore power converter.

Connection to the shore will be via a 20 metre shore cable capable of 100 amp per phase duty. This is fed and retrieved via a Glendinning cable master.

Main Switchboard

AC Power is fed into a power management system that protects and manages the available power supplies and distributes power to sub-distribution boards throughout the boat.
The power management system is installed within a space directly adjacent to the engine room. Appropriate panel instrumentation is provided to permit local monitoring and in the event of an emergency, manual control of the system.

Two distribution sections are provided, each directly fed by one generator. Under normal operating conditions one generator is nominated as the duty set and this machine will supply the entire boatload. The second generator is designated as the stand-by set.

Manual switching between duty and stand-by generators automatically seamlessly connects the stand-by machine and shares the load during peak demand. Manual operation is via the touch

screens (Marine Personal Assistant) located at the bridge and main switchboard location which shares a screen in the engine room.

When a shore power connection is available, switching between generator and shore power will be “seamless” i.e. there will be no interruption of AC power.

The ‘Marine Personal Assistant’ (M.P.A) facilitates control and monitoring of the main ship systems including tank levels, breaker status, alarm activation and monitoring, pump controls once manual valve selection has been completed, bilge and fire information and all electrical load management. The MPA can accommodate additional facilities when requested as a customer variation.

Power Distribution
The final circuits in the boat are protected by residual current circuit breakers (GFCI or ELCB) and by over-current circuit breakers.
Sub distribution boards are proposed as follows:

- Crew Area
- Galley
- Accommodation
- Wheelhouse
- Machinery Space (Main Panel)

Separate distribution panels are provided for AC and 24V DC circuits. Each outgoing circuit from a panel is protected by a circuit breaker. Spare circuits are provided in each panel.

721 Earth Bonding/Annodes

Zinc anodes are fitted adjacent to all metallic underwater fittings, and a comprehensive bonding system is installed to ensure that the greatest possible efficiency of cathodic protection is obtained.

- Stern anodes are installed to protect propulsion and manoeuvring fittings, including all external through hull fittings that are permanently in contact with sea water.
- Local anodes are provided for external through hull fittings positioned in the forward hull section. These local anodes are not connected to the rest of the boats bonding system
- Local anodes are provided to protect the bow thruster.
- All earth connections are connected to a bronze earth plate on the under side of the hull. In addition to normal underwater bonding, all metallic handrails on the sky deck only are connected to earth.
- Propeller shafts will have shaft brushes fitted.
- A second identical earth plate on the hull is connected exclusively to the lightning conductor spike at the mast in accordance with Classification requirements.

722 - Shorepower, Transformers & Convertors (34 - Confidential)

Atlas SPA90 shorepower converter (90kVA) in lieu of Isolation Transformer

722 - Shorepower, Transformers & Convertors (34 - Confidential)

Second 100A socket with 20m cable required

722 Shore Power/Trans/Conv

Shore Supply System

As standard, an auto-stepping isolation transformer is installed. This unit will perform adequately where there is always a good quality shore power supply and where only one shore power standard exists. Due to the limitations of transformer technology, if shore supply voltage is inconsistent then power supply onboard may temporarily be disconnected on occasion as the transformer unit attempts to adjust to the variations.

Where it is intended that the boat will operate in areas that shore supply may be of poor quality or if different shore power standards may be encountered, it is recommended that an optional shore power converter be installed. This unit has the sophistication to deal with extreme variances in supply without affecting the onboard power. The only occurrence of power loss onboard in this case will be the result of total shore power failure at the dock.

For boats with European standard power supplies, a single 100A power inlet (capable of passing a total power in excess of 60kW) is recommended for family cruising use.
For boats with US standard power supplies it is recommended that two inlets, each of the 100A (each capable of passing a total power in excess of 35kW) be positioned.
All inlets to be provided with Glendinning Cable master. Cable length to be 20m as standard and the cable shall remain flexible at temperatures down to 10C.

723 - Generators (34 - Confidential)

Generators upgraded to Kohler EFOZD 80kW in lieu of standard 70kW

723 - Generators (34 - Confidential)

Second Generator P.T.O for hydraulic system & Trac Star (when stabilisers specified)

723 Generators

The standard generators will be:-

2 x Kohler 70EFOZD 70kW 400/230V 3 phase 50Hz (European Specification)
2 x Kohler 80EOZD 80kW 400/230V 3 phase 60Hz (USA Specification)

Generator capacity is subject to upgrade dependant upon final specification and client specified options.

732 24 VDC Distribution

24V DC Power Supply

24 Volt DC power supplies are distributed using a grounded negative system.
Power is supplied from 5 separate battery banks. The banks are designated as follows:

- Port starter battery (270Ah) connected to port generator start motor and port main engine start motor
- Stbd starter battery (270Ah) connected to stbd generator start motor and stbd main engine start motor
- Domestic services battery (315Ah)
- Emergency battery (315Ah)
- Radio Battery (55Ah)

Start Batteries are flooded lead acid marine start batteries. All other batteries are maintenance free AGM valve-regulated lead acid type.

Main Switching and Distribution
Equipment supplied from the console services battery include essential and maintained services including some navigation aids and emergency systems.

The machinery space is divided into port and starboard sections, each section containing one main engine and one main generator. A dedicated start battery is provided to service each section. The capacity of these batteries is selected to provide ample reserve taking into account the recommendations of the manufacturers of both the engine and generator.

Under normal operation, cross connection facilities are provided to enable charging of all batteries from a single charge source and to maximise starting current for the main engines. Further cross connection is provided to the domestic services battery in the event of failure of an engine start battery.

The domestic services battery supports all 24V DC systems throughout the vessel other than engine/generator start, emergency and communications systems. Engine control circuits are supplied from this battery to prevent voltage fluctuations during engine start from interfering with the controls.

The Emergency battery supports all of the emergency systems including Emergency engine controls power (where fitted) and is located within the Lower Deck Service Area. The capacity of this battery bank is determined from the Emergency DC load, and is sufficient to support emergency systems for more than the minimum period necessary to satisfy classification requirements.

Battery isolators and crossovers are manually operated and are readily accessible within the engine room or up forward for the emergency and radio batteries.

Charging
A charging alternator is fitted to each main generator. These alternators are used to supply charge to the associated starter battery. Only one engine has a charging alternator to enable emergency operation of Main Engines at low RPM in the unlikely event of complete generator failure and therefore loss of AC power.

Multiple 24V battery chargers are installed. These are arranged so that each battery bank has sufficient charging to maintain the batteries at their optimum capacity. Where additional equipment is specified extra chargers may be required to support the increased DC load.

The standard battery chargers are:

- Service Charger (67A)
- Engine Charger (67A)
- Emergency Charger (44A)
- Radio Charger (20A)

733 12 VDC Distribution

12V DC power supplies where fitted are distributed using a grounded negative system. Services supplied from 12V DC may include communications equipment, some navigational aids and console services. Dedicated power supplies or converters are installed where necessary and are used to support these services.

748 Garage/Sunbed/Door/ Window

The boat is equipped with a tender garage that can be used to store petrol-powered craft. This is the only area of the boat, which can be used for this purpose.

Electrical equipment in the garage area is specified so as to be suitable for use in these environment -ref IEC 60079 - ATEX regulations

The following equipment is provided:

1 x ATEX certified (IS) smoke detector connected to the boat fire alarm system.
1 x ATEX certified gas detector.
1 x Emergency light fitting ATEX certified
1 x ATEX approved bilge pump
1 x Air extract fan ATEX certified
2 x Fire dampers (1 air in, 1 air out ATEX certified)
1 x Low airflow switch (ATEX Certified) connected to the MPA screen to alert if the air extraction system fails.

All electrical equipment in the garage is installed to IP55 standard minimum.
Non-certified essential electrical equipment is only installed above 450mm from the garage deck.
This will include but is not limited to:

Electrical sockets
Non-certified lighting
Compressors

Items for which there is no or inadequate IP Rating available, are fitted with a manually operated isolation switch positioned in a prominent location outside of the tender garage that will isolate every pole of the power supply to the equipment.
This will include but is not limited to:

Electrical tender winch

The location of the equipment in the garage area is based on Sunseeker Reference Drawing 700-14

760 - Interior Lighting & Utility (34 - Confidential)

LED Interior lights to be fitted

760 - Interior Lighting & Utility (34 - Confidential)

Gold Vimar Lighting Package required

760 Interior Lighting/Utility

The standard interior lighting will be arranged as local circuits, predominantly via transformed power supplies. The interior lighting is locally switched with light fittings from the standard Sunseeker range. No central lighting control system is fitted, however as standard the following functionality is provided:-

Main Deck Saloon	Scene Control with dimming functionality.
Main Deck Dining Area	Scene Control with dimming functionality
Master Stateroom	Scene Control with dimming functionality
Upper Deck saloon	Dimming functionality

All other guest cabins, en-suites and common areas are locally switched with no dimming as standard.

770 - Exterior Lighting & Utility (34 - Confidential)

Underwater Lights - 15 x Large Xenon 100mm (150w) (3 across transom and 6 on either side)

770 Exterior Lighting/Utility

The standard exterior light is a white LED type marine grade fitting. All exterior lighting is controlled via the Touchscreen control system

No underwater lights are provided as standard.

770 Exterior Lighting/Utility MCA Large Yacht Code 2

Specific standard lights of the Yacht's exterior will make up the Emergency lighting and will automatically switch in the event of loss of ship's main power. These lights will illuminate the escape routes, muster points and disembarkation points and reflected on the Yacht's Safety & Lifesaving Plan.

Additional lights connected to the Emergency Lighting circuits will be fitted for the following areas:-

- LED Lights to illuminate the Liferaft deployment area on the Upper Deck (1x per side)
- LED Lights to illuminate the water landing area of the liferaft's (1x per side)
- LED Lights to illuminate the disembarkation of personnel into liferafts (1x per side)

776 Navigation Lights

Navigation lights are provided, based on the International Regulations for the Prevention of Collision at Sea 1972 (IMO). The standard light is the Aqua Signal Series 55 for vessels 20-50m in length. In order to comply, the masthead light will be fitted forward of midships on a separate carbon fibre mast.

776 Navigation Lights MCA Large Yacht Code 2

The primary navigation lights (Port, Starboard, Steaming & Stern) will be provided with an Emergency power supply, switched from the Emergency distribution board beneath the wheelhouse console. The forward mast will be fitted with a second steaming light. This will allow the operator to maintain operation within 3 minutes in the event of lamp failure.

777 Horns & Horn Controls

The standard Air Horn shall be a chrome finish dual trumpet, with separate air compressor, and local valve. The standard air horn will comply to current Collision Regulations in force. Horn control will be in the Main wheelhouse only as standard.

778 Wipers

5 x Pantograph windscreen wipers with Screen washers are provided with control in the wheelhouse.

780 - Alarms & Monitoring (34 - Confidential)

MPA Monitoring - Additional Touchscreen as Master Screen in the Crew Mess. This is a full Touchscreen display and works independently of the Wheelhouse or Main Panel displays. If you change the MPA page in the Crew Mess no other displays will change.

780 - Alarms & Monitoring (34 - Confidential)

MPA Monitoring - ModBus Generator Control and Monitoring System Upgrade Additional system feature allowing complete control and monitoring of generator parameters and alarms via MPA Touch Screen.

780 - Alarms & Monitoring (34 - Confidential)

MPA Monitoring - Yacht Exterior Access Point Monitoring Upgrade Additional system feature allowing immediate viewing of the state of all doors and hatches with warning alarms via MPA Touch Screen

780 - Alarms & Monitoring (34 - Confidential)

MPA Monitoring - CCTV system with four static cameras and dedicated 15" MPA master display in crew mess connected to Tijssen system

780 - Alarms & Monitoring (34 - Confidential)

MPA Monitoring - SMS Paging facility allowing MPA alarms to be sent to up to five GSM accounts

780 - Alarms & Monitoring (34 - Confidential)

MPA Monitoring - Swipe card security alarm system - Integrated to MPA

780 Monitoring & Control

Monitoring and Control system will be provided that will incorporate the following facilities:

AC System Power monitoring
Monitoring and control of AC switch gear
Monitoring of main generator parameters
DC System Power monitoring
Monitoring and control of DC switch gear
Monitoring of the following fluid tank levels:
- 2 off main diesel fuel tanks – Full range with multiple alarm points
- 1 off day diesel fuel tank – Full range with multiple alarm points
- 2 off fresh water tanks – Full range with multiple alarm points
- 1 off grey water holding tank – Full range with multiple alarm points
- 1 off black water holding tank – Full range with multiple alarm points
- All levels to be displayed in litres

Provide control and monitoring of all major fluid pumps (Fuel Transfer, Black & Grey)
Provide control and monitoring of engine room ventilation
Provide monitoring of the status of all main circuit breakers
Provide monitoring and control of navigation lights
Provide monitoring of fire detection system (excluding boat fixed fire fighting systems)
Provide monitoring and control of all exterior deck lighting
Provide monitoring via a single float switch of bilge water level in five bilge compartments

- Three Master 15" M.P.A Touchscreen displays shall be fitted. One located on the Electrical Main Panel, one in the Wheelhouse and one in the Crew Mess.
  Each Master display will give the operator full independent viewing and control.

- One slave 15" M.P.A Touchscreen display shall be fitted. One located in the engine room next to the fuel bunker station to aid fuel filling.
  The Slave screen will give the operator full control but will also control the attached Master screen.

Additional facilities, touch screens and non interactive displays are available as optional upgrades.

780 Monitoring & Control

Monitoring and Control system will be provided that will incorporate the following facilities:

AC System Power monitoring
Monitoring and control of AC switch gear
Monitoring of main generator parameters
DC System Power monitoring
Monitoring and control of DC switch gear
Monitoring of the following fluid tank levels:
- 2 off main diesel fuel tanks – Full range with multiple alarm points
- 1 off day diesel fuel tank – Full range with multiple alarm points
- 2 off fresh water tanks – Full range with multiple alarm points
- 1 off grey water holding tank – Full range with multiple alarm points
- 1 off black water holding tank – Full range with multiple alarm points
- All levels to be displayed in litres

Provide control and monitoring of all major fluid pumps (Fuel Transfer, Black & Grey)
Provide control and monitoring of engine room ventilation
Provide monitoring of the status of all main circuit breakers
Provide monitoring and control of navigation lights
Provide monitoring of fire detection system (excluding boat fixed fire fighting systems)
Provide monitoring and control of all exterior deck lighting
Provide monitoring via a single float switch of bilge water level in five bilge compartments

- Two Master 15" M.P.A Touchscreen displays shall be fitted. One located on the Electrical Main Panel and one in the Wheelhouse. Each Master display will give the operator full independent viewing and control.

- Two slave 15" M.P.A Touchscreen displays shall be fitted. One located in the engine room next to the fuel bunker station to aid fuel filling and transfer and one located in the crew Mess. Each Slave screen will give the operator full control but will also control the attached Master screen.

Additional facilities, touch screens and non interactive displays are available as optional upgrades.

780 Monitoring & Control MCA Large Yacht Code 2

Complete, stand alone approved Fixed Fire Detection/Fire Alarm System shall be installed in the wheelhouse that complies to Classification Standards and shall be interfaced to the Ships monitoring system. This provides a fully redundant fire early warning system with integrated back-up power.

The door between galley and crew mess has a magnetic hold back fitted. The door is closed upon activation of the Fire Detection and Fire alarm System.

All galley services are to be switched off from a location outside the galley.

Engine room ventilation flaps are to be closed upon activation of the engine room heat detectors via the ships monitoring system.

Heat/Smoke detectors located throughout the boat are installed and are in compliance with the Classification Standards.

Manual call points (break glass) are located throughout the boat are installed and are in compliance with the Classification Standards.

Alarm Sounders are located and are audible throughout the boat and are in compliance with the Classification Standards.

Intrinsically safe gas detection system is installed within the garage space and interfaced directly to the Fire Detection system

In addition to the fluid tank monitoring installed as standard, the following are included in the MPA monitoring system:

- 1 off lubrication oil tank – Full range with multiple alarm points
- 1 off dirty oil tank – Full range with multiple alarm points
- 1 off sludge tank - Full range with high level alarm point

788 - White Goods (34 - Confidential)

Custom Refrigeration in Main Galley (1800 litres fridge capacity, 800 litres freezer capacity)

788 - White Goods (34 - Confidential)

Miele Professional Washing machine, Tumble dryer (stern laundry) & dishwasher (galley) in lieu of std with preparation in the stern laundry for second washing machine and dryer

788 - White Goods (34 - Confidential)

Additional Miele Professional Washing machine and Miele Professional Tumble dryer (total 2 washers and 2 dryers) to be fitted in the stern. Above the washers and dryers locker doors are to be fitted for stowage of soap powder etc

788 White Goods

Note: Appliances from the Miele domestic range * (unless otherwise indicated). Where a particular model Number has been specified, these models are subject to availability and the replacement of new models. Quantity and type of white goods are subject to limitation and change depending upon the final specification and general arrangement.

Standard Main Deck Galley and Main Deck Servery appliances:
2 x Full height refrigerators (390 Litre each)
1 x Full height freezer (261 Litre)
1 x Dishwasher*
2 x 600mm wide single oven's*
1 x Microwave*
3 x 2 burner hobs
1 x Extractor Hood*
1 x Coffee Maker* (free-standing)
1 x Under counter Wine cooler (38 Bottle)
1 x Ice maker

Standard Crew appliances:
1 x Under counter Fridge
1 x Slimline dishwasher*
1 x Microwave

Standard Upper Deck Servery appliances:
1 x Full height refrigerator (390 Litre)

Standard Skydeck appliances:
1 x Refrigerator (100 Litre)
1 x Ice maker
1 x Griddle

Standard Upper Deck Bar appliances:
1 x Refrigerator (150 Litre)
1 x Icemaker

Standard Guest Accommodation appliances:
1 x Mini-Bar – Master Stateroom

Standard Stern Laundry appliances:
1 x Washing machine*
1 x Tumble dryer (Condenser)*

800Navigation,Comms&Entertainment

The navigational and communication equipment listed represents an estimate of the type and quantity that will ultimately be installed. However, the manufacturer and/or model may vary depending on the latest equipment available at the time of order. Additional equipment may be specified optionally.

The Standard Specification Comprises of:

Radar
Furuno X Band FAR2117 Black Box with 12kw, 6ft open array antenna, ARPA ready, and keyboard control unit connected to 17" TFT display in Wheelhouse.

Central Navigation Display
Sold state Marine PC controlling speed, depth and heading, controlled via PS2 roller ball mouse connected to 17" TFT display in Wheelhouse.
Airmar 744 Triducer shall be fitted for water speed and depth.

Chart Plotter
Rugged Marinised computer running with chart plotting software, controlled via PS2 roller ball mouse connected to 17" TFT display in Wheelhouse.

Autopilot
Simrad AP50 system, interfaced to Satellite Compass with display in Wheelhouse. Simrad RF45X Rudder reference shall also be fitted.

Compass
A Furuno SC50 Satellite Compass including antenna, processor unit is also fitted with a display in Wheelhouse.
A magnetic compass shall be fitted in the wheelhouse.

GPS
Furuno GP150 12-channel GPS connected to Navigation PC and Radar

Searchlight
1 x 24V Sanshin remote searchlight with independent control located in the Wheelhouse.

Chronometer/Barometer
One off combined located in Wheelhouse.

Air Horn
One off Dual Trumpet Air Horn with Air Compressor locally mounted.

Items identified above are part of the standard navigation package. Any additional equipment required will be quoted for. Models listed are correct at time of specification and these items may be replaced depending upon availability and replacement by newer models.

All thru hull transducers to be located in the engine room compartment, forward of the main engines.

800Navigation,Comms&Entertainment MCA Large Yacht Code 2

In order to comply with MCA Large Yacht Code 2, (greater than 300GT but less than 500GT), the following navigation equipment must be fitted:

- 1x Type Approved Echo Sounder (Furuno FE-700 Echo Sounder with 6.5" Display)

- 1x Type Approved G.P.S (Furuno GP-150 receiver c/w antenna)
- 1x Type Approved distance measuring log (Sperry FNF)
- A gyro compass (or spare magnetic compass bowl) Furuno SC50 Satellite Gyro Compass.
  (The SC50 is Not a type approved product. This is acceptable under MCA code if a spare
  compass bowl is supplied with the magnetic compass)
- A rudder angle indicator- to be separate from autopilot rudder angle indicator. (Simrad RF45X)
- A 9 GHz radar (Type approved) Furuno FAR2117BB Radar to include TFT display.
- AIS system (Type approved) (Furuno FA-150 AIS system)
- Electronic charting system (ECDIS) or paper charts for area being covered by vessel.
  Transas software and navigation PC (This is Not a type approved system – it is assumed that
  suitable paper charts would be supplied by the owner and carried on the boat)
- Bridge Navigational Watch Alarm System (BNWAS) Furno BR500 or equivalent

Also see 820 Communication equipment for details of: VHF, Handheld VHF, Sat C system, Navtex, EPIRB and SART.

820 Communication Equipment

Satellite System
One off Thrane & Thrane Fleet Broadband 250 phone system comprising of antenna, fixed handset and connected to onboard PABX telephone system.

Telephone System
Internal PABX telephone system, comprising fixed handsets in all guest cabins, saloon, wheelhouse, crew mess and galley. Two shoreline inputs shall be provided, 1 x Phone and 1 x Fax. Both of these shall be connected to the PABX.

VHF
Simrad RS87 DSC VHF system with three handsets. Separate GPS antenna (no display) shall be connected to VHF.
Handsets are located in the following areas:-

Wheelhouse
Crew Mess
Emergency Steering Position.

Emergency Radio Beacon
McMurdo Float free EPIRB unit

Aerials
All associated aerials for above listed equipment.

Loudhailer
1 x Loudhailer horn shall be connected to the Simrad RS87. Final location dependent on General Arrangement.

Items identified above are part of the standard communication package. Any additional equipment required will be quoted for.

820 Communication Equipment MCA Large Yacht Code 2

In order to comply with MCA Large Yacht Code 2, (greater than 300GT but less than 500GT), the following communication equipment must be fitted:

- An approved MF Radio
- An approved Class A VHF DSC Radio. (Sailor 6222 Class A VHF DSc or equivalent)

- An INMARSAT Thrane & Thrane (SAT C) with L.R.I.T
- 2 off approved hand held VHF radio with NiCAD batteries.
- A Navtex Receiver is required if the vessel is operating over 60 miles from a safe haven. (Furuno NX-700 or equivalent)
- EPIRB
- SART

The relevant authority will approve all radio communications equipment.

There will be sufficient power for conducting distress and safety radio communications for a minimum of one hour in the event of failure of the vessels main and emergency sources of electrical power see section 734.

825 - Navigation Equipment (34 - Confidential)

Navigation Equipment - Upgrade to 3 x Hatteland 19" monitors for the Wheelhouse console in lieu of standard

825 - Navigation Equipment (34 - Confidential)

Navigation Equipment - Transas - AIS integration option

825 - Navigation Equipment (34 - Confidential)

Navigation Equipment - Transas - ARPA integration option

825 - Navigation Equipment (34 - Confidential)

Navigation Equipment - Transas - Radar integration option

825 - Navigation Equipment (34 - Confidential)

Navigation Equipment - Ultrasonic wind system to be connected to Central Navigation Display

830 - Entertainment Equipment (34 - Confidential)

Main Deck Saloon AV requirements:

Bang & Olufsen Upgrade to include:
1x B&O Beosystem 3
1x Beosound 5
Beolab 12-3 Speakers
Beolab 2
Apple iPod dock
1x Samsung Bluray Player
Cat 7 network

1 x Samsung 64" HD LED TV on rise and fall
Kaleidescape M500 player
Crestron PTX3 Remote

830 - Entertainment Equipment (34 - Confidential)

Upper Deck Saloon AV requirements:

1 x Bose Lifestyle V35 system (with ipod dock)
1 x 55" Samsung HD LED TV on rise and fall
1 x Samsung Blu-ray player
Kaleidescape M500 player
Crestron PTX3 Remote

830 - Entertainment Equipment (34 - Confidential)

Aft Double Guest Cabins AV requirements:

1 x Bose 235 system (with ipod dock)
1 x Samsung 40" HD LED TV on rise and fall
1 x Samsung Blu-ray player
Kaleidescape M300 player
Crestron PTX3 Remote

830 - Entertainment Equipment (34 - Confidential)

Forward Twin Guest Cabins AV requirements:

1 x Bose 235 system (with ipod dock)
1 x Samsung 32" HD LED TV
1 x Samsung Blu-ray player
Kaleidescape M300 player
Crestron PTX3 Remote

830 - Entertainment Equipment (34 - Confidential)

Main Deck Master Stateroom AV requirements:

1 x Bose Lifestyle V35 system (with ipod dock)
1 x 55" Samsung HD LED TV
1 x Samsung Blu-ray player
Kaleidescope M500 player
Crestron PTX3 Remote

830 - Entertainment Equipment (34 - Confidential)

Sky Deck AV requirements: (zoned from Upper Deck Saloon V35)

8 x Speakercraft AIM 8-five speakers
4 x Bose SA2 Amplifier
1 x Bose PMC II remote

830 - Entertainment Equipment (34 - Confidential)

Upper Deck Aft Cockpit AV requirements:(zoned from Upper Deck Saloon V35)

4 x Speakercraft AIM 8-Five Speakers
2 x Bose SA2 Amplifiers
1 x Bose PMC II remote

830 - Entertainment Equipment (34 - Confidential)

Main Deck Aft Cockpit AV requirements: (zoned from Main Deck Saloon V35)

4 x Speakercraft AIM 8-Five speakers
2 x Bose SA2 Amplifiers
1 x Bose PMC II remote

830 - Entertainment Equipment (34 - Confidential)

Wheelhouse AV requirements: (zoned from Upper Deck Saloon V35)

4 x Speakercraft AIM 8-Five speakers
2 x Bose SA2 Amplifiers
1 x Bose PMC II remote

830 - Entertainment Equipment (34 - Confidential)

Audio feed from B&O system 3 to Bose V35 in Upper Deck Saloon

830 - Entertainment Equipment (34 - Confidential)

32" Exterior TV to be fitted in the aft cockpit

830 Entertainment Equipment

Satellite Television System
A one off system KVH M7 (or equivalent) will be provided as standard with two satellite decoders. One decoder will be located in the Main Deck Saloon and a second decoder shall be fitted in the Master Stateroom. The Main Deck Saloon satellite decoder shall be fed to the Upper Deck Saloon and Lower Guest televisions without control.

Terrestrial Television
A single UHF antenna shall be fitted on the main navigation mast with associated local amplifier for terrestrial television reception.

Entertainment System
A Surround-Sound Home Entertainment system to be integrated through the upper deck and main deck saloons.

Sky Deck
3 x Pairs Marine speakers (Zoned from Upper Deck Saloon)
3 x Bose SA2 Amplifier
1 x Bose PMC II remote

Upper Deck Aft Cockpit
2 x Pairs Marine Speakers (Zoned from Upper Deck Saloon)
2 x Bose SA2 Amplifier
1 x Bose PMC II remote

Main Deck Aft Cockpit
2 x Pairs Marine Speakers (Zoned from Main Deck Saloon)
2 x Bose SA2 Amplifier
1 x Bose PMC II remote

Wheelhouse Deck
2 x Pairs Marine Speakers (Zoned from Upper Deck Saloon)
2 x Bose SA2 Amplifier
1 x Bose PMC II remote

Upper Deck Saloon
55” LCD Television
Bose V25 Lifestyle System with iPod Docking Station
Samsung Blu Ray Player

Main Deck Saloon
55” LCD Television
Bose V35 Lifestyle System with iPod Docking Station
Samsung Blu Ray Player

Master Stateroom
55” LCD Television
Bose V25 Lifestyle System with iPod Docking Station
Samsung Blu Ray Player

Starboard Guest Double Stateroom
32” LCD Television
Harman Kardon BDS2 - 2.1 Blu Ray System

Port Guest Double Stateroom
32” LCD Television
Harman Kardon BDS2 - 2.1 Blu Ray System

Starboard Twin Guest Cabin
32” LCD Television

Harman Kardon BDS2 - 2.1 Blu Ray System

Port Twin Guest Cabin
32” LCD Television
Harman Kardon BDS2 - 2.1 Blu Ray System

Crew Mess
32” LCD Television
Harman Kardon BDS2 - 2.1 Blu Ray System

Crew Cabin 1
Ipod Fusion/Radio & 1 x Pair Speakers

Crew Cabin 2
Ipod Fusion/Radio & 1 x Pair Speakers

Crew Cabin 3
Ipod Fusion/Radio & 1 x Pair Speakers

Captains Cabin
20” LCD Television
1 x Car Type CD/DVD Player
1 x Pair Car Type Speakers

Wheelhouse
1 x Car Type CD/Radio & 1 Pair Speakers

Main Deck Galley
1 x Car Type CD/Radio & 1 Pair Speakers

An FM antenna and amplifier shall be provided for connection to all entertainment locations.

900 General Arrangement

The interior design of the 40 Metre Yacht promotes the latest Sunseeker interior styling. The design combines classic and recognisable details with a modern twist. The primary objective is to create a timeless elegant atmosphere utilising signature details and materials that best represent true luxury and comfort.

In order to achieve this the design criteria is to accentuate the feeling of space, using light, textural materials and intelligent planning. Ultimately, the interior design considers both the physical needs together with the emotional experience, promoting the feeling of well-being.

The specification of materials and finishes will be to Sunseeker Super Yacht standard and will be consistently incorporated to enhance the quality of the interior design. Each design element is considered to achieve a seem-less flow within the yacht. For this reason there is continuity in the architectural details designed with the understanding that each customer may have a requirement to personalise the interior. This can be achieved in the individual selection of soft finishes, accessories and certain lighting elements.

Generally, all of the interior finishes will be natural. Lacquered timber, hard woods, stone finishes and leather all designed to further accentuate the sensation of luxury. All of the interior finishes will bear in mind durability, therefore soft finishes on bulkheads will be carefully specified to ensure ease of maintenance and cleaning.