BILGIN YACHTS

BILGIN 156

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BILGIN YACHTS

1. GENERAL CONDITIONS

1.1 MAIN PARTICULARS OF PROJECT

It is the intent of these specifications, the plans and general conditions of the contract, accompanying and forming a part thereof, to provide for the complete design, construction and delivery in accordance therewith, of a twin screw steel-aluminum displacement motor yacht suitable for extended unrestricted service.

The Project development shall comply with the requirements of the Classification Society and the Flag Administration.

The Flag Administration will be nominated by the Builder for a commercially operated yacht. The Builder shall pay for the costs incurred on matters of certification for LY3 compliance whereas costs incurred on matters such as port registry of the vessel and its crew endorsements shall be at Owner's expense.

The design, materials chosen and construction methods followed shall conform to worldwide charter yacht building principles.

The Machinery concept is to achieve reliability by utilizing proven machinery and equipment from known manufacturers to assure that future maintenance is obtainable in remote areas within reasonable levels.

1.1.2 Dimension

Length overall	47.50 meters
Length on waterline approximately	41.28 meters
Beam Max.	8.75 meters
Draft Max.	2.5 meters
Displacement (fully loaded) approx.	446 tons

1.1.3 Tank Capacities

Fuel Tank	63,800 Litres	16,845 US gallons
Freshwater Tank	11,600 Litres	3,062 US gallons
Blackwater Tank	3,000 Litres	792 US gallons
Greywater Tank	6,000 Litres	1,585 US gallons
Lube Oil Tank	1,350 Litres	315 US gallons
Dirty Oil Tank	1,200 Litres	345 US gallons
Bilge Tank	1,050 Litres	275 US gallons

1.1.4 Performance

Max speed at half load displacement:	16 knots
Cruising speed:	12 knots

1.2 REGISTRATION

a) All fees and taxes associated to the registration of the Vessel shall be paid by the Owner.

1.3 BUILDER

The construction shipyard for this project is:
Bilgin Yatçılık ve Turizm İşlt. Tic. Ltd.Şti
Fatih Mah. İç Kumsal Bizim Sok. 45 İstanbul/Küçükçekmece, Turkey
Tel : +90 (212) 599 63 53
Fax : +90 (212) 599 62 43
referred to as the 'Builder'.

1.4 NAVAL ARCHITECTS, DESIGNERS & BUILDER

1.4.1 Exterior Styling
UNIQUE Yacht Design & Naval Architecture
Tel : +90 242 259 39 59
Fax : +90 242 259 39 59
referred to as the 'Exterior Designer'.

1.4.2 Naval Architecture & Engineering
UNIQUE Yacht Design & Naval Architecture
Tel : +90 242 259 39 59
Fax : +90 242 259 39 59
referred to as the 'Architect'.

1.4.3 Interior Design & Styling
H2 Yacht Design
Tel : +44 208 788 50 08
referred to as the 'Interior Designer'.

1.5 CLASSIFICATION & CERTIFICATES

1.5.1 Classification
a)The yacht will be built in accordance with RINA Charter Class
b)The class notation shall be: **Hull, • Mach, Y Unrestricted Navigation** and will comply with **MCA LY3 Large Yacht Code.**

1.5.2 MCA Certification
a) This vessel will comply with all of the requirements of LY3 - The Large Commercial Yacht Code Large for vessels 24 meters and over in load line length and the Code of Practice that applies to yachts which are in commercial use for sport or pleasure, do not carry cargo and do not carry more than 12 passengers.

1.5.3 Safety & Pollution Requirements
a) Construction will comply with all relevant COLREG and IMO regulations.
b) At completion, a MARPOL pollution and sewage certificate will be delivered.

1.5.4 Certificates

a)The following certificates shall also be enforced and/or supplied:

- Builder's Certificate
- Statement/Letter of Compliance for MCA Large Commercial Yacht Code
- Exemption Certificates (as applicable, the owner's representative to be informed in advance)
- Classification Society Certificate (Short term)
- International Tonnage Certificate
- International Load Line Certificate
- Safety Construction Certificate
- Safety Equipment Certificate
- Safety Radio Certificate
- Marpol Annex I (IOPP)
- Marpol Annex IV (Sewage)
- Marpol Annex VI (IAPP)

1.5.5 Country of Registry Regulations (Owner's charge)

The Flag Administration will be nominated by the Builder for a commercially operated yacht. The Builder shall pay for the costs incurred on matters of certification for LY3 compliance whereas costs incurred on matters such as port registry of the vessel and its crew endorsements shall be at Owner's expense.

2. HULL & DECK CONSTRUCTION

2.1 GENERAL

2.1.1 Construction - General

a) The hull and forward wide body up to the upper deck will be entirely of welded steel construction.

b) The deckhouse and upper deck and sun deck will be manufactured with marine grade aluminium and/or composite for lightweight structures where required.

c) The steel to alloy connection will be done by using an approved joining strip, which allows welding the two materials, tri-clad or equivalent.

3. PROPULSION

3.1 MAIN ENGINES

3.1.1 Main Engines Particulars

a) There shall be fitted with two (2) four-stroke diesel engines of the following model:

- Manufacturer : MTU®
- Type : 12V2000 M72 -1B
- Power : 2 x 1,080 kW (1,448 BHP) @ 2,250 rpm

3.1.2 Wheelhouse Instrument

a) The wheelhouse room shall be equipped with MTU® - Blue Line™ electronic monitoring and control system.

3.2 GEARBOXES

a) The gearboxes are free standing light metal housing gear boxes with integrated propeller thrust bearings will be installed.

- Manufacturer : ZF MARINE®
- Type : ZF 3350
- Ratio : 4:1

3.3 CONTROLS AND INSTRUMENTATION

3.3.1 Engine Controls

a) An approved electronic control system will be supplied by the manufacturer and installed by the Builder. The controls of this system will be placed on the dash board near the helm and wing stations

b) There will be three (3) stations:

- One (1) at main station in the wheelhouse;
- Two (2) at wing stations at both sides of the wheelhouse.

3.4 GENERATORS

3.4.1 General

a) The main electric power is supplied by three (3) diesel-driven, water-cooled generator sets.

b) The power of generators to be 80kW each as per electrical load analysis.

3.4.2 Generator Sets

a) Engines will be mounted on vibration eliminators and to have a flexible exhaust line connection.

b) All units shall be located in their own accessible sound enclosures

c) The diesel engines are to be fresh water cooled by heat exchanger system.

d) The starting system shall be 24 VDC fitted with isolators to enable locally shutting off the power supply to the engines

e) Generator sets:

- Manufacturer : KOHLER®,
- Model : 80EOZDJ

4.STEERING, THRUSTERS & STABILIZERS

4.1 STEERING

4.1.1 Steering Gear

a) The steering gear shall be Electro Hydraulic system and manufactured by HIDROMARIN® .
b) The technical specifications will satisfy RINA Charter Classification Regulations.

4.2 BOW THRUSTER

4.2.1 General

a) Builder will install a horizontal marine bow thruster. The bow thruster shall be electric driven.

4.2.2 Bow Thruster

a) The Builder shall install a Side Power® electrical bow thruster, rated power 83 kW, with joystick controls at all three (3) control stations.

4.3 STABILIZERS

4.3.1 Stabilizers

a) The Builder shall install two (2) fin zero-speed stabilizer system. The system is described as an active, non-retractable zero-speed fin hydraulic stabilizer system. Fin stabilizer system made by ABT-Trac®.

5. SYSTEMS

5.1 PUMPS

a) All pumps, where possible or otherwise specified, shall be AZCUE® or equal

5.2 ANCHOR & MOORING SYSTEM

5.2.1 Anchor Windlasses

a) The fore castle deck will be fitted with two (2) independent, vertical type, polished stainless steel anchor windlass assembly with hydraulic drive and manufactured by HIDROMARIN®.

5.2.2 Anchors

a) Two HHP type stainless steel anchors will be supplied. (weight will be calculated as per Class regulations) shall be provided and installed.

5.2.3 Anchor Chains

a) Chain calibration will be calculated as per Class regulations as calibrated galvanized U2 stud-linked chain, to be located in chain lockers.

5.2.4 Fairleads

a) To reduce the chafe on the mooring lines, AISI 316L stainless steel fairleads will be fitted to the bulwarks according to mooring plan.

5.2.5 Capstans

a) Two (2) mooring capstans will be fitted on main deck aft corners each serving two bollards for handling mooring lines from the stern.

5.2.6 Bollards

a) All the bollards will be fabricated of AISI 316L stainless steel, polished to a glossy finish and welded to the deck on heavy structures.

5.3 FUEL SYSTEM

5.3.1 Fuel Transfer System

a) Fuel can be transferred via the following pumps:
- Electrical pump model BT-HM38D4 by AZCUE® capacity 7,5 m^3 /h at 1,5 bar.
- There will also be hand pump as backup of transfer pump.

5.3.2 Fuel Separator

a) A centrifugal fuel separator model OTC 2-02-137 by GEA Westfalia®,
- Viscosity : ≤15 cSt at 40 °C
- Effect. Capacity : 830 l/h

5.4 WASTE WATER SYSTEM

5.4.1 Toilet System

a) JETS® vacuum toilet system is to be installed with two vacuum pumps.

5.4.2 Treatment Plant

a) Sewage treatment plant model ECOMAR 16 TECNICOMAR™ system will be installed in the engine room.
- Capacity: 6000 lt./day

5.4.3 Toilets

a) 14 toilets, JETS® model, for all bathrooms and dayheads.

5.5 HYDRAULIC SYSTEM

5.5.1 Main Hydraulic Power Pack

a) A separate hydraulic power pack will be arranged for:
- Anchor windlass and capstans.
- Roll stabilizing system

b) Gangway, transom door, side shell door, overhead crane, sundeck crane and jetski crane will have their own dedicated power packs.

c) The electro-hydraulic power-pack shall be driven by two (2) 11kW, 380-480 VAC, 3-phase, 50/60 Hz electric motors and a dedicated control box.

5.6 CLIMATE CONTROL

5.6.1 Air Conditioning System

5.6.1.1 Chiller Unit

a) The compressor units shall be MARINECOLD®
b) There shall be a four-compressor units.
c) The chiller unit shall be 400 VAC, 3-phase, 50/60 Hz with a total cooling capacity of 480,000 BTU.

5.6.1.2 Fan Coils

a) Two (2) fresh air makers shall insure the distribution all over the vessel of dry and pre - cooled fresh air coming from outside the vessel.
b) The fan coils repartition shall be as follow:

- Upper Deck Salon : (3)
- Captain Cabin : (1)
- Wheelhouse : (2)
- Upper Deck Pantry : (1)
- Main Deck Salon : (4)
- Main Deck Lobby : (1)
- Galley : (2)
- Owner's Cabin : (2)
- Owner's Office : (1)
- Guest's cabins : (4) one for each guest cabin;
- Crew's cabins : (4) one for each crew cabin;
- Crew mess : (1)
- Laundry : (1)
- Engine Room : (2)
- Beach Club : (1)

5.7 FRESHWATER SYSTEM

5.7.1 Fresh Water Pumps

a) There will be two (2) LOWARA® or equal 400 VAC, 2.2kW, 3-phase water pressure pumps.
b) One (1) pressure tank will be fitted. The pressure regulator will start the pump at 2.5 bars and stop it at 3.5 bars. Pressure accumulator tank is 100 liters.

5.7.2 Hot Water System

a) Two (2) insulated stainless steel 316L hot water tanks manufactured by DIKO®, each 200 lt. capacity, will be placed in the pump room. Each tank will be fitted with three (3) immersion electrical heaters; total heating capacity around 20 kW.

5.7.3 Water makers

a) Two (2) TECNICOMAR® S 3/40 double water maker, with an output capacity of 2 x 350 l/h or a total capacity 16,800 litres (4,438 gallons) per day, will be installed.

5.7.4 Water Filtering System

- Media and carbon filters will be fitted at the shore filling line before the storage tanks.
- A water softener will be fitted at the shore filling line before the storage tanks.
- A silver ion filter will be fitted at the shore filling line before the storage tanks.
- At the outlet of the water pressure system, a properly sized UV filter is to be arranged.

5.8 BILGE / FIRE FIGHTING SYSTEM

5.8.1 Pumps

a) There will be three (3) pumps installed in the vessel to run the bilge and fire system:
- Two (2) Centrifugal pump in engine room : AZCUE® 400 VAC, 7.5kW Capacity : 35 m³/h
- One (1) Diesel engine type in emergency room : AZCUE® Diesel Driven Capacity : 35 m³/h

5.8.2 Oily Water Separator

a) One (1) RWO® bilge oil/water separator, with a capacity 0,5 m³/h shall be installed in compliance with MARPOL and MCA rules and regulations.

5.8.3 Water-Mist Fire Extinguishing System

a) The yacht will be fitted with ULTRAFOG® water mist system which will protect all accommodation.
b) A fixed gas type NOVEC® fire suppression system will be used in main technical spaces including engine room.

5.9 PNEUMATIC SYSTEM

5.9.1 Low-Pressure Air System

a) An air compressor with pressure accumulator tank, air dryer, filter and pressure adjuster with a capacity of 10m^3/h will serve around the vessel.

5.10 LUBE OIL SYSTEM

5.10.1 Oil Transfer Pumps

a) All diesel engines will be serviced by a pump, with a capacity of 2.2 m³/h.

5.11 DOMESTIC APPLIANCE SYSTEMS

5.11.1 Crew Galley Appliances

a) One (1) SIEMENS® full fridge.
b) One (1) SIEMENS® microwave oven.
c) Proper secure stowage provisions shall be provided for all equipment items not permanently installed.

5.11.2 Galley Appliances

a) One (1) SIEMENS® stainless-steel refrigerator, stand-alone type.
b) One (1) SIEMENS® stainless-steel freezers, stand-alone type.
c) One (1) four-burner SIEMENS® electric induction cooking range.
d) One (1) custom stainless steel exhaust canopy with fire extinguishing system.
e) Two (2) SIEMENS® cooking oven.
f) One (1) SIEMENS® steam oven.
g) One (1) SIEMENS® microwave oven.
h) One (1) SIEMENS® dishwasher.
i) One (1) waste grinder/disposal units for under sink installation.
j) One (1) BROAN® under-counter trash compacter.
k) One (1) SCOTSMAN® under-counter ice maker.
l) One (1) SIEMENS® grill.
m) One (1) SIEMENS® deep fryer.

5.11.3 Main Deck Pantry Appliance

a) One (1) SIEMENS® coffee machine.

5.11.4 Upper Deck Pantry Appliances

a) One (1) SIEMENS® under-counter fridge
b) One (1) SIEMENS® dishwasher.

5.11.5 Owner's Appliance

a) One (1) HAFELE® fridge in owner's cabin.

5.11.6 Sun Deck Appliances

a) One (1) ISOTHERM® ice maker.
b) One (1) ISOTHERM® under-counter fridge.

5.11.7 Laundry and Utility Room Appliances

a) Two (2) SIEMENS® washing machines;
b) Two (2) SIEMENS® dryers;

5.11.8 Guest Lobby Appliance
a) One (1) HAFELE® fridge in owner's cabin.

5.11.9 Beach Club Appliances
a) One (1) SIEMENS® under-counter fridge.
b) One (1) SIEMENS® under-counter ice maker.

5.12 COLD ROOMS

5.12.1 General
There will a large cold room arrangement on the main deck. The cold room cooling capacity +4°C and volume is approx. 3.5 m³.

6. ELECTRICAL SYSTEM

6.1 GENERAL

a) The Vessel's main power supply shall be 220V/380V AC, 50 Hertz three-phase four-wire system based on a split-bus distribution circuit.
b) The electrical power supplies on board are based on:
- Three (3) generators rated at 80 kW, 400V, 50 Hz;
- One (1) shore power rated at 120 kVA, 170V-520V AC, 50/60 Hz input; 400V AC 50Hz output.
- 24V DC battery banks;

6.2 SHORE POWER SYSTEM

6.2.1 General
a) Shore power cable shall be provided aft in the garage. They will be accessible from outside.
b) Care will be taken to ensure that all cables are routed from the shore so as avoid obstruction on deck or to the gangway.
c) These cables will be connected to a 120 kVA shore power converter that will act as a galvanic isolation transformer as well as a frequency converter.
d) Controller unit shall be installed in a clean, dry space.

6.2.2 Frequency Converter
a) The frequency converter shall be an ESIS POWER® , double-input with a maximum output to a single bus of 120 kVA, 400 VAC, 3-phase, 50 Hz.

6.2.3 Shore Power Cable
a) Two (2) 130-foot (40 m) 2x125 Amp./ 170 -520 V, 4-wire Ship to Shore cord.
b) Plugs receptacles and adapters, to accommodate 125 Amp. single (1) or three (3) phase power.
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6.3 POWER CONVERSION EQUIPMENT

6.3.1 Battery Chargers

a) There are three (3) 60 Amp and three (3) 30 Amp battery chargers, MASTERVOLT® or equal, with a manual change-over system for changing wires. This will enable charging of all battery banks to take place with backup in the event one of one of the charger is failing.

Emergency & GMDSS Batteries:

a) Emergency batteries will power the following units:
- Any specialized equipment in need of sine wave power supply,
- Navigation equipment supplies, when needed.

b) These emergency batteries to be powered off the ship's main power.

6.4 AUTOMATION SYSTEM

a) An automation system consisting of one dedicated automation processor, a set of required interfaces all linked together by a data bus is installed on the vessel.

b) The purpose of this automation system is to control and monitor the entire vessel.

c) All the equipment used for the automation system is Type Approved and manufactured by the SCHNEIDER GROUP® or equivalent.

6.5 ALARM, SAFETY AND WARNING SYSTEMS

6.5.1 Central Alarm Systems

a) The automation system will be the central unit of the alarm system on board.

7. ELECTRONICS

7.1 COMMUNICATION

7.1.1 SSB Transceiver

a) One (1) SAILOR® MF/HF 6360 SSB, 150W, GMDSS approved, automatic antenna tuning unit fitted with automatic and manual grounding system.

7.1.2 VHF Transceiver

a) Two (1) SAILOR® VHF RT 6222 with DSC Class A, both located at console, Wheelmark approved.

7.1.3 Handheld VHF

a) Two ENTEL® , HT649, handheld GMDSS VHF waterproof made and fitted with a multi desk quick charger.

7.1.4 SAT TV

One (1) INTELLIAN® T100 TV-at-Sea satellite receiver with dual European and American LNB.

7.1.5 VSAT

a) One (1) INTELLIAN® V100 VSAT station to be connected to the PABX telephone exchange and ship's LAN systems for Internet access and VoIP.

7.1.6 Inmarsat-C Station
a) One (1) SAILOR® 6110 Mini-C with GPS-option GMDSS Inmarsat C station with H-1252 dedicated printer..

7.1.7 SSAS
a) One (1) SAILOR® SSAS add-on kit with Alert & Test buttons.

7.1.8 Safety Transponders
See Chapter: XII.1.3 EPIRB & SART

7.1.9 Telephone Distribution
a) One (1) PANASONIC® PABX connected to the the VSAT, cell phone units and shore connection when available.

7.2 NAVIGATION ELECTRONICS

7.2.1 GPS
a) One (1) SIMRAD® GN70 GPS receiver system connected to the NMEA interface.

7.2.2 Navtex
a) One (1) Sailor® 6391 Navtex receiver with active antenna.

7.2.3 AIS Transceiver
a) One (1) SIMRAD® V5035 AIS station transceiver connected to the NMEA interface.

7.2.4 Navigation Monitoring
a) SIMRAD® Bridge navigation system to be as follow:
- Four (4) HATTELAND® M5024 24" LCD displays,
- One (1) Speed Transducer for Motor Yacht set,
- One (1) Skipper® GDS101 Echosounder module,
- One (1) Simrad® 110WX Wind direction and speed sensor pack,

7.2.5 Navigation Instruments
- One (1) Compass CASSENS & PLATH®, Type 21 reflector reading device,
- One (1) Inclinometer sensor.

7.2.6 Echo sounder
a) One (1) echo sounder Skipper® GDS101 interface.

7.2.7 Radars
a) One (1) SIMRAD® Argus 12U/6X P IMO-ARPA Radar, 12 kW, 96 Nm, fitted with 6ft. scanner unit shall be connected to the gyro compass and GPS Nmea output via ECDIS E5024.
b) One (1) SIMRAD® Halo 4 Pulse Compression Radar, 12 kW, 64 Nm fitted with 4ft. scanner unit shall be connected to the gyro compass and GPS Nmea output via ECDIS E5024.

7.2.8 Autopilots
a) One (1) SIMRAD® AP70 IMO/Wheelmark automatic pilot connected to the gyro compass and NMEA interface.
b) A NMEA switch by software or hardware shall be provided for using either GPS NMEA output or marine navigation software NMEA output.
c) The output signal will drive the main steering system.

7.2.9 Gyrocompass

a) One (1) regular SIMRAD® GC80 gyrocompass with sin/cos, Cif and step by step interfaces.
b) A rudder feedback unit and a remote control display shall be provided.

7.2.10 Navigation Software

a) One (1) SIMRAD® E5024 ECDIS navigation software with NMEA and radar overlay interfaces.

7.3 NAVIGATION, NON ELECTRONIC

a) One (1) RIEKER® Instrument RIE-2055 inclinometer.
b) One (1) CASSENS & PLATH® or equal magnetic compass to be fitted in navigation area according to Classification Society rules.

7.4 ENTERTAINMENT

The entertainment system shall consist of following equipment:

7.4.1 Central Rack & A/V Server

- 1 x Savant HST-4501 Host Controller
- 2 x Savant SSA-4012
- 3 x Savant SMQ Power Amplifier
- 8 x Savant SSC-0012 Smartcontrol 12
- 2 x Savant RLY-12 IP Relay Box 10
- 1 x 48 Port Gigabit Switch
- 10 x RCE Satallite Receiver
- 12 x Apple Airport Access Point

7.4.2 Crew Quarters

- The crew will have the ability to watch Satellite TV, CCTV, Movies and Music on demand from the central server using the TV, controlled by one colour screen remote or listen to personal iPOD/MP3 player from a docking station.
- 40" 4K TV Samsung or equal
- 32" LCD screen for CCTV
- 1 x Samsung Bluray Player

7.4.3 Captain's Cabin

- The captain will have the ability to watch Satellite TV, CCTV, Movies and Music on demand from the central server using the TV, controlled by one colour screen remote or listen to personal iPOD/MP3 player from a docking station.
- 32" LCD TV Samsung or equal

7.4.4 Owner's Accommodation

- Owner will have the ability to watch Satellite TV, CCTV, Movies and Music on demand from the central server using the TV, controlled by one colour screen remote or listen to personal iPOD/MP3 player from a docking station.
- 1 x 48" 4K TV Samsung or equal.
- 1 x Denon AVR-X 3200W Network Receiver
- 1 x Samsung Bluray Player
- 5 x Vanguard Dynamics EDW-601Speaker
- 2 x Vanguard Dynamics FLC-600 Speaker
- 1 x Dali Fazon Subwoofer

7.4.5 Guest's Accommodation

- Guests will have the ability to watch Satellite TV, Movies and Music on demand from the central server using the TV, controlled by one colour screen remote or listen to personal iPOD/MP3 player from a docking station.
- 1 x 40" 4K TV Samsung or equal.
- 1 x Denon AVR-X 1200W Network Receiver
- 1 x Samsung Bluray Player
- 4 x Vanguard Dynamics FLC-600 Speaker

7.4.6 Main Deck Saloon

- Owner and guests will have the ability to watch Satellite TV, CCTV, Movies and Music on demand from the central server using the TV, controlled by one colour screen remote or listen to personal iPOD/MP3 player from a docking station.
- Ability to play the same or different music as inside or the different decks.
- 1 x 65" 4K TV Samsung or equal.
- 1 x Denon AVR-X 3200W Network Receiver
- 1 x Samsung Bluray Player
- 5 x Vanguard Dynamics EDW-601Speaker
- 2 x Vanguard Dynamics FLC-600 Speaker
- 1 x Dali Fazon Subwoofer

7.4.7 Aft Main Deck

- Owner and guests will have the ability to listen to all music on the server, controlling volume and track, album or playlist. Selection of music is easy and stress free, choose the album by cover then select the required music.
- 1 x 55" 4K Waterproof TV Sunbrite or equil.
- 1 x Denon AVR-X 3200W Network Receiver
- 1 x Samsung Bluray Player
- 4 x TDG Audio NFC-81 Speaker

7.4.8 Upper Deck Saloon & Dining

- Owner and guests will have the ability to watch Satellite TV, CCTV, Movies and Music on demand from the central server using the TV, controlled by one colour screen remote or listen to personal iPOD/MP3 player from a docking station.
- Ability to play the same or different music as inside or the different decks.
- 1 x 80" 4K TV Samsung or equal.
- 1 x Denon AVR-X 3200W Network Receiver
- 1 x Samsung Bluray Player
- 5 x Vanguard Dynamics EDW-601 Speaker
- 1 x Dali Fazon Subwoofer

7.4.9 Upper Deck Aft

- Owner and guests will have the ability to listen to all music on the server, controlling volume and track, album or playlist. Selection of music is easy and stress free, choose the album by cover then select the required music.
- 4 x TDG Audio NFC-81 Speaker

7.4.10 Sun Deck

- The ability to listen to all music from the server, controlling volume and track, album or playlist. Selection of music is easy and stress free, choose the album by cover then select the required music. Watch all movies from the server using the video projector.
- 1 x 55" 4K Waterproof TV Sunbrite or equil.
- 1 x Denon AVR-X 3200W Network Receiver
- 1 x Samsung Bluray Player
- 6 x TDG Audio NFC-81 Speaker

7.4.11 Foredeck Area

- You will have the ability to listen to all music on the server, controlling volume and track, album or playlist. Selection of music is easy and stress free, choose the album by cover. One remote covers both the bridge and forward area.
- 2 x TDG Audio NFC-81 Speaker

7.4.12 CCTV

- You will have the ability to watch all 10 cameras showing different area's of the yacht, whilst constantly recording; cycle time of 7 days recording.
- 10 x Exterior cameras – with night vision – mid range
- 1 x CCTV duplexer and recorder – Built in Hard drive – 16 Channel – giving spare

7.4.13 Shore Connection

a) The following shore connections to be provided:

- Telephone (to vessel's PABX);
- Ethernet/LAN.

8. EXTERIOR OUTFITTING

8.1 WOOD JOINERY EXTERIOR

8.1.1 Teak Decks

a) Teak deck planks will be 12mm thickness and 50-60mm wide, glued to deck with SIKAFLEX® or equal.

8.2 DECK EQUIPMENT

8.2.1 Windscreen Wipers

a) Three (3) SPEICH® or equal windscreen wipers, 24 VDC with 40" wiper blades shall be fitted to the forward windows of the wheelhouse.

8.2.2 Gangway

a) One (1) 7.5 meter long BESENZONI® electro-hydraulic gangway will be fitted portside of stern. It shall be able to rotate 15 degrees vertically.

8.2.3 Swimming Ladder

a) The stainless steel swimming ladder shall extend approximately one meter down into the water and have comfortable 600mm wide teak steps.

8.2.4 Flag Pole

a) A jack staff to be supplied with track, cleat and stainless steel socket on the aft end of the pilothouse deck.

8.3 TENDER GARAGE

8.3.1 General

a) The tender garage will accommodate one (1) tender with overhead crane.

9. JOINERY INTERIOR

9.1 GENERAL

a) The quality of the interior of the entire Vessel shall be of high quality. These criteria shall apply to com parative spaces and include the choice of timbers, fabrics, fittings, fixtures, hardware, finishing levels etc.

10. COATINGS & COVERINGS

10.1 PAINT SYSTEM

10. 1.1 General

a) The painting system shall be INTERNATIONAL® for fairing and primers; AWLGRIP® for top coating.

11. SAFETY EQUIPMENT

11.1 GENERAL

11.1.1 Life Rafts & Equipment

a) Four (4) RFD® for 12 people each or equal life rafts to be supplied by the Builder as per Class and SOLAS regulations for a vessel of this size.
b) A total of 4 SOLAS approved orange commercial yacht life buoys with lights and buoyant lines, two of which will have smoke signals, will be positioned around the ship in proper recesses where practical, on proper brackets.

11.1.2 EPIRB & SART

a) One (1) SIMRAD® EG70 EPIRB with hydrostatic release and deck mount casing;
b) One (1) SIMRAD® SA50 Search and Rescue Transponder.

11.1.3 Flares

a) The following equipment is to be supplied with the Vessel in accordance with governing authorities:
- Six (6) parachute flares
- Four (4) hand flares
- Three (3) orange smoke day signals.

11.1.4 Searchlights

a) Two (2) JABSCO® searchlights mounted on the mast with remote control at the helm in wheelhouse.

11.1.5 First Aid Kit

a) A first aid kit, suitable for a world-wide cruising motor yacht of this size, according to SOLAS and Lloyd's is to be supplied.

11.1.6 Life Vests and Harnesses

a) Twenty four (24) life vests, with radar and light reflectors, will be supplied with the vessel in accordance with SOLAS, Class and U.S Coast-guards regulations.

b) A whistle and stroboscopic light will be delivered for each life vest.

11.1.7 Fire Alarm System

a) A general fire alarm system fully in accordance with the statutory - and class and requirements shall be installed.

b) The system shall incorporate:

- Smoke sensors in all accommodation spaces.
- Manual alarm triggers at strategic locations.
- Heat sensors in the galley and engine room.
- Audible alarm bell.
- Alarm indicating panel in the wheelhouse.

11.1.8 Fire hoses

a) Twelve (12) fire hoses shall be housed in deck lockers, connected to the fire main:

- Two (2) at bridge deck level.
- One (1) at the ultrafog compartment.
- Two (2) on main deck level.
- One (1) on the bridge deck.
- Two (2) at guest and crew accommodation area.
- One (1) at engine room.
- One (1) at emergency pump room.
- Two (2) at bilge area.

Each hose shall be fitted with a dual purpose nozzle and shall be stored in a non-corrosive rack.

11.1.9 Misc. Fire fighting Items

- One (1) fire suit with breathing apparatus, one fire axe and one fire blanket to be stored in the proper locations.
- Fire blankets in the galley, crew lounge, pantry, engine room.