Sophie 63'

Technical Specifications

Yacht Overview

Length overall	19.06 m	*62'6"*
Length waterline	17.85 m	*58'6"*
Maximum Beam	8.86 m	*29'*
Displacement	approx. 48 T	*105000 lb*
Draft	1.35 m	*4' 5"*
Living area	145 m²	*1560 sqft*

Engines	Caterpillar C9	
	Caterpillar C18	Optional
Max speed	Approx.26 kt	
Cruising speed	Approx. 22 kt	@85%RPM
Range @ 9 knots	>2000 nm	
Diesel capacity	10000 L	*2650 G*
Fresh Water	1500 L	*400 G*

Design Team

Concept/management :	Stéphane POUGHON / Monaco
Naval architecture :	VAN PETEGHEM & LAURIOT PREVOST / France
Exterior design :	Richard HEIN - VEGAYACHTS / Monaco
Interior design :	Olivier GIBAULT / France
Interior engineering :	Antonio COSTAMANTE / Italy
Technical engineering :	Mike TAYLOR / USA

1) HULL AND DECK EQUIPMENT – Exteriors

The hull shape is designed in order to optimize the boat's stability and autonomy. It is made in female moulds of advanced composites, implemented with highly elaborate processes.

1.1) Construction

- Hulls: lights weight cored composites with glass/vinylester skins with reinforced laminates in high loaded areas.
- Bottom hulls: monolithic glass/Kevlar + vinylester laminate.
- Structural bulkheads: sandwich of foam core and unidirectional glass/polyester skins.
- Watertight collision bulkheads at forepeak
- Bridge deck and deck: sandwich of light density Balsa core and glass/polyester skins

1.2) Finish

Above waterline

- ❑ Gel-coat system on the topsides
- ❑ Awl grip paint (optional)
- ❑ Non-skid coatings on deck surfaces

Below waterline

- ❑ Epoxy barrier coat
- ❑ Antifouling

Internal

- ❑ All interiors of lockers, bilges, engine compartment coated with a 2 part polyurethane paint.
- ❑ Interiors living area are varnished woods (oak or teak) and fabrics

1.3) Deck equipment

- ❑ Teak on aft main deck
- ❑ Teak on front main deck
- ❑ Teak on fly bridge (optional)

1.3.1) Anchoring and mooring system

- ❑ Main mooring line : 75 lb anchor + 175' of 3/8'' SS chain
- ❑ Secondary mooring line: 65 lb kg anchor + 125' of 1/2'' SS chain
- ❑ Dual gypsy windlass (with (optional) electric capstan fitted in forward deck locker), with up/down command and chain counter
- ❑ 2 mooring fairleads with rollers forward
- ❑ 2 electric capstans on aft deck (optional)

1.3.2) *Gangway*

- One single passerelle fibreglass made
- Electric retractable gangway (optional)

1.3.3) Hatches, portholes and windows

- One access hatch to mooring lines
- Two lockers under forepeak sunbeds
- Fixed glass windows around pilot house's roof (with wipers) and owner's cabin
- Two flush portholes above owner's cabins
- Two flush portholes above pilot house
- Four flush hatches on aft deck
- Two watertight accesses hatches to lazarette/crew cabins from aft deck

1.3.4) Deck fittings

- Eight mooring cleats and fairleads
- Integration of life rafts in the aft beam
- Fuel and water filling caps with vents
- Black water deck discharge caps
- Dual shore power inlets
- Fresh water shower aft (hot/cold)
- One swimming ladder in the transom

1.4) Flybridge

- One access staircase from cockpit
- One helm station with a triple seat
- One forward side sofa with cushions and integrated storage
- One centred outdoor bar fitted with refrigerator/icemaker and three stools adjustable seats
- Barbecue and sink area to aft port
- Relaxing area : one dining foldable table and five chairs that converts to a wide sunbathing bed with cushions
- Hard top (optional)

1.4.1) Pilot control station and flybridge

- One secondary pilot control station
- 360° visibility, protected by windshield
- Network navigation system with full function flybridge station. (optional not included)

1.4.2) Mast

A mast designed for all antennas and lights is set above the outdoor bar. Hard Top (optional)

1.4.3) Tender launching system

Flybridge fitted with a tender hydraulic electric crane and tender chocks.

1.5) Aft Deck

- Access stairs to dual transom platforms
- One flybridge access staircase to port side
- Two hatches to aft lazarette/crew cabins
- Access to salon by sliding door
- Two lateral sofas with cushions and integrated lockable storage
- Two expandable coffee tables
- 4 - 6 seats (owner supply)
- Security rail aft

1.6) Foredeck

- Full walk-around access
- Side doors access from pilothouse
- Two sunbathing beds with cushions on sides
- Sun bed on master cabin roof(optional)
- Integral security railing

2) LIVING AREAS AND ACCOMMODATION – Interiors and living areas

Living areas are conceived with a particular regard to the quality of living and safety. Designed to the highest standards for ventilation and air conditioning with attention to acoustic and thermal insulation. From this attention results a healthy and pleasant interior, worthy of a villa.

Each stateroom is equipped with network and audio/video connections. The sole is wood.

2.1) Air conditioning

- Reverse cycle, chilled water air conditioning system. (optional)
- Compressor located in one engine room
- Circulation throughout the interior with individual thermostats
- Fan coils are isolated from the interior for noise attenuation.
- Each area with thermostat control.

2.2) Salon

- Access from cockpit through full glass sliding doors – same level as aft deck
- Raised galley and pilothouse
- One flexible U-shaped sofa with cushions and coffee tables
- Book shelves to portside

Dining Area

- One Hi-fi stereo system, with CD, DVD, AM/FM radio, 4 loudspeakers in the saloon area, 4 waterproof speakers in the cockpit area and flybridge (optional not included)
- One 42" Plasma flat screen in salon with surround, VCR and DVD player facing salon (optional not included)
- One square foldable dining table
- One sofa with entertainment unit and plasma TV cabinet
- Four chairs
- Satellite antenna for TV system (optional not included)

2.3) Galley

- U-shape galley to starboard upper main deck with large work surfaces, under-mount stainless steel sink, ample drawers and lockers with overhead storage lockers.

2.3.1) Galley equipment

- Oven
- Microwave oven
- Electric cooking plates with cooker hood
- Dishwasher
- Trash compactor
- Waste disposal

2.3.2) Refrigeration

- Fridge ~ 225 L
- Day freezer ~ 100 L
- Storage freezer ~ 100 L
- Ice maker
- All are AC appliances operated on inverter system.

2.4) Pilot House

- Two weathertight door accesses to sideways
- Two side stairs leading to cabin deck
- One central dashboard fitted with navigation instruments, steering wheel and system monitoring
- One seat captain armchair
- One chart table
- One facing forward cushioned sofa and two seats around a multiuse table to port side

2.4.1) Control and monitoring systems

All measuring, monitoring and alarm apparatus are centralized in the pilothouse main control station. A generator control panel is fitted at the electrical panels.

The steering system is electric/hydraulic with (optional not included) integrated autopilot system. Both steering position are equipped with a rudder angle indicator.

2.4.2) Navigation and communication systems

- One compass
- One chronometer & barometer set (owner supply)
- One flybridge remote control auto-pilot (optional not included)
- Two VHF radio with intercom. (optional not included)
- One network GPS/echo sounder/radar/chart plotter (plotter) (optional not included)
- One Inmarsat Fleet 33 (optional not included)

2.5) En-suite guest staterooms (each side)

- Access from the pilot house via stairs

In the stateroom

- Numerous drawers under the bed
- Large lockers and closets on bedsides and under the bench on hull interior sides
- One wardrobe
- One queensize bed
- One desk plate with pouf
- Integrated ceiling lights, plugs, switches

En-suite bathroom/toilet with door

- One washbasin
- One cabinet with mirror and wall light
- One cabinet with shelves under the washbasin
- One toilet

En-suite shower with door

- Separated from toilet by a frosted glazing
- Overhead light
- One sit-stand bench

2.6) Owner's stateroom

- Main access from the pilothouse through stairs to a landing and door
- 180° panoramic view facing forward

In the stateroom

- One king-size bed facing forward
- Four large drawers under the bed
- Bed side cabinet with lamp and drawer to port, dressing table starboard
- One desk, chair and bookshelves to forward port section
- TV system locker under the windows.
- Large wardrobe and cupboards on forward part, under the windows
- Integrated ceiling lights, plugs, switches
- One 32" LCD screen for TV/DVD (optional not included)

Independent bathroom area

- Main access through port stairs
- Two washbasins above fitted cabinet
- Two mirrors with wall lights on hull side
- One door separated toilet
- Three closets with shelves
- One large shower room with door and teak benches

2.7) Starboard forward cabin

2.7.1) Children cabin option

- Access from the pilot house through stairs
- One large double bed
- Drawers under the bed

En-suite bathroom with door (used as day toilet)

- One washbasin above a fitted cabinet
- One mirror with wall light
- One shower
- One toilet

2.7.2) Owner's office option

- Access from owner's stateroom
- Desk with chair
- Network and audio/video connections
- Leads to changes in owner's stateroom layout (sofa and larger wardrobes)

2.8) Lazarette and crew cabin

- Access through two hatches from aft deck

Portside laundry/crew bathroom area

- One washing machine
- One drying machine
- Shower, washbasin and toilet

Starboard crew cabin

- Two beds
- Drawers and cupboards

3) TECHNICAL EQUIPMENT

All equipment is selected with the greatest level of quality and reliability, complying with the highest worldwide standards.

3.1) Mechanical

Engine rooms (one on each side)

- Access from aft laundry/crew areas through watertight doors with full standing headroom
- Good accessibility and easy monitoring of all of the machinery
- Mechanical ventilation to supply the motor with air and minimize temperature
- Easy access to all fluid circuit controls
- Storage for tools and engine spares
- Efficient sound proof insulation

Equipment features

- Twin engines with propulsion sets
- One primary generator
- Secondary generator (optional)
- Starting batteries
- Battery chargers
- Main AC & DC switchboard
- Dual black water grinding pump with holding tank in each hull
- Automatic bilge pumps
- Wash down and fire pump system
- Hot water heaters
- ○ Reverse cycle chilled water air conditioning system (optional)
- ○ Water maker (optional)

3.1.1) Engines / propulsion

- Twin engines Cat C9 Acert rating D,
- Twin engines Cat C18 rating E (optional)

- ZF marine gears, flanged to engine
- Aquadrive system (optional)
- Wet exhaust with under-waterline bypass
- Aqualloy 22 propeller shafts
- Flex coupling and dripless shaft seal
- Fixed pitch propellers

3.1.2) Steering

- Twin rudders with 316L s/s. shaft
- 70° steering angle with rudder stops
- One electronic control per engine

3.1.3) Fuel tanks

All tanks are made of GRP (with baffels to avoid free surface effect). They are located under the salon floor, in order to center the loads.

- Two main tanks equipped with :
  - Gauge column indicator
  - Low & high level alarm
  - Easily accessible inspection lids
  - Venting to hull side
  - Transfer pump & filter
  - 7 000 L total capacity (*1 850 G*)
- Fuel fill box for filling up from the deck
- Third tank on long range version (optional)
  - 3 000 L (*790 G*)

3.2) Electrical

The electrical system is designed for flexibility, both home and abroad. "No more rewiring the vessel to go across the pond." The AC electrical system is designed for either US or European use.

We have purposely designed the AC electrical system so that the vessel may operate from available shore power around the world. This is accomplished by using a split bus electrical system. One bus supplies a universal air conditioning system and the other bus operates systems that have been selected for use on universal power - 240/60 or 230/50 (V/Hz). Then, all critical frequency (Hz) systems operating from inverter power. So, US appliances will not be affected by European shore power and European appliances will not be affected by US shore power.

All electrical systems are installed to the following standards:

- US Vessels: American Boat & Yacht Council Standards
- European Vessels: 94/25/EC Boat Directive: ISO Standards
- MCA Commercial Small vessel(optional)

Power Supplies
- 24 VDC house battery bank
- 24 VDC navigation/emergency battery bank
- Generator(s) AC
- Engine alternators DC
- Dual shore power cords (AC)

3.2.1) DC System

The DC electric system is the primary system for all vessel operations. The inverter system is a key component as this is also the power supply for frequency critical (Hz) AC systems for the galley services. Thus, with only the main engines, the vessel is functional without shore power or generator power.

Additionally, power for the navigation and underway operating systems are provided by 24-24 V converters with a back-up power supply for emergency power. With this design, if the main battery bank were to fail, the vessel's critical operating systems will still function. 12 V DC power required for electronics are supplied by 24/12 V converters.

Battery banks (located under pilot house)
- One service battery bank; 800 Ahr standard
- One electronics battery bank; 120 Ahr standard

Service and electronics battery charging system
- High output alternators on each engine
- Multiple battery chargers from AC power
- Sophisticated monitoring of all batteries banks

AC & DC Switchboards
- Situated in starboard pilothouse staircase
- Full control point for vessel systems
- Blue Sea type heavy-duty fuses and power selector switches.
- Digital displays for voltage, amperage and remaining capacity

DC Outlets (24 V)
- Flybridge
- Main helm
- Other locations are optional

3.2.2) AC System

Generators
- One main generator 20 kW with sound shield
- One night set generator (optional)

Shore supply
- Two 50 amp shore connections with isolation transformers

Split bus AC supply for Independent power selection for:
- Air conditioning power supply
- Service bus power supply
- Inverter bus power supply

3.2.3) Lighting

Exterior

- Navigation lights to International standards.
- Stair courtesy and emergency lights with emergency power supply
- Multiple circuit exterior lighting for ambiance in all areas
- Two forward spot lights
- Two docking light (optional)
- Search Light (optional)
- Four underwater lights aft (optional)

Interior

- Main deck with dimmer switches and multiple circuits options for ambiance
- Halogen ceiling light fixtures in salon, galley and cabins
- Indirect lights in the wardrobes
- Each berth with reading lights
- Ceiling lights in bedrooms, salon, pilot house
- IEE and LED lights in technical and crew areas

3.2.4) Wiring

Full wiring schematics and wiring ID codes are provided.

3.3) Plumbing

3.3.1) Sea water system

- Each main engine with independent sea water intake and strainer system.
- Each engine room with auxiliary seawater intake with strainer in each hull with manifold system for :
  - Pressurized deck/chain wash system
  - Generators
  - Watermaker (optional)
  - Air conditioning compressor cooling pump
- High quality bronze through-hull fittings and valves.

3.3.2) Fresh water system

- Two fresh water tanks made of sanitary coated fibreglass, one in each hull, total capacity of 1 500 L (400 G), level indicator
- Two pressurized 24V fresh water pumps with pressure accumulator
- One 80L heating tanks supply hot water
- Polybutylene piping
- Water filtering and sterilization system(optional)
- Water maker with salinity control (optional)

3.3.3) Grey water system

- Each hull with integrated grey water tanks with level indicators and inspection hatches
- Overboard discharge DC pumps.
- Anti-odour traps and filters

3.3.4) Black water circuit

- Each hull with independent high density polyethylene holding tanks.
- Each tank is fitted with
  - Inspection hatch
  - Level indicator with 60% & 90% alarm
  - Vent with charcoal anti-odour filter
  - Water flushing connection
  - Electric macerator and manual discharge pump
  - Shore on deck discharge connection
- Overboard discharge or transfer through individual 3-way valves.

3.4) Security/safety

3.4.1) Bilge pumps

- High capacity pump in each engine room, automatic float switch with auto/manual operation and high water alarm.
- All other compartments with pumps with automatic/manual switches and high water alarms.

3.4.2) Fire fighting system

- Fixed fire fighting system in each engine room with automatic and manual release system. Arranged with automatic engine and ventilation stops.
- Alarms located at both steering stations
- Six portable fire extinguishers located in the living areas