

**BENETTI** *Sail Division*  
Shanghai Shipyard Corporation

## **BSD** ***BENSHIP 16 IPS***



## **TECHNICAL SPECIFICATION**



### **HEADQUARTERS**

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### **OPERATIVE UNIT**

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## SPECIFICATION

Vessel: motor yacht with a planning hull, twin screw propellers and twin diesel engines

Builder:	Benetti Sail Division Shanghai Shipyard Corporation
Exterior Designer:	A-Cube
Naval Architect:	Riccardo Benetti /CLM Design
Workshop drawings:	A-Cube
Classification:	RINA PLEASURE CE B CATEGORY
Material of Hull:	5083 H 111 aluminium
Warranty:	2 years from yacht's acceptance

## DIMENSIONS

Overall length	m	16.030
Length at water line	m	13.470
Beam O.A.	m	4.650
Height from water line up to radar arch	m	3.725
Design draft approx	m	1.20
Inside height at main deck	m	1.90
Light Ship displacement (indication)	ton	20.5
Fuel tanks capacity	m <sup>3</sup>	2.00
Fresh water tanks capacity	m <sup>3</sup>	0.75
Black and grey water tanks capacity	m <sup>3</sup>	0.35
Guest's bed places	n°	4+1

## PERFORMANCE

Max speed at 1/3 load conditions A)	Kn	35.00
Cruising speed A)	Kn	30.00
Range at cruising speed A)	NM	270
Engines installation A)		IPS

## PROPULSION SYSTEM

Main engines A)	Volvo Penta	2 x IPS 950 D
Max power A)	Hp@rpm	725@2500
Generator	Type	1 x 12 Kw
Propeller	Kw	2 x 5 blades

The construction of the hull and all items will be such to reduce to a minimum all vibrations that may damage the hull's structure or the equipment or that may interfere with the equipment operation or affect the on-board comfort.

Special attention will be paid to supplying suitable foundations for the main engines, engine room machinery and equipment, generators, accessories and reduction gears.

A lubricating pump will be fitted on each gear box in order to avoid any damage, due to propeller shaft turning in case the boat is sailing with one engine off.

## INSULATION AND SOUNDPROOFING

### 1. ONBOARD NOISE LEVELS.

Using means appropriate for a yacht of the highest quality and considering all sources of noise, whether mechanical, hydrodynamic or other sources, the following noise levels shall not to be exceeded at trial's conditions.

All on-board noise measurements shall be carried out according to ISO standard #2923, "Acoustics Measurements of Noise Onboard Vessels".

During measurements, the yacht shall be fully furnished and outfitted with draperies and linen.

Noise limits		dB[A] ± 2 dB		
				Cruising at 30 kts
				1 generator in full use
Lower deck	dinette			82
	Master cabin			78

Upper deck	Wheel house			83

These maximum noise levels apply for relative conditions:

- Main engines (as required for cruising speed )
- Generator running
- The yacht fully equipped with upholstery, carpets, curtains, loose furniture, linen
- Entertainment equipment and nautical communication equipment shut down
- The yacht in half load condition with fuel, wastewater and freshwater at 50% capacity
- Wind force not exceeding Beaufort scale 2
- Sea state Beaufort sea state II
- All interior doors, exterior doors and windows closed

### 3. ACOUSTIC PRIVACY.

The design requirements for noise reduction between cabins [doors closed] shall be taken into consideration, especially in the Owner’s cabin, to reduce transmission of voices from and to any of the other areas.

“State of the art” super yacht standard techniques shall be applied throughout the yacht to achieve the acoustic targets. Special attention shall also be applied to the laundry area in particular the aft bulkhead.

The exterior paint procedure for hull and superstructure will be according to BOERO cycle  
Top coat final painting cycle will be AWLGRIIP for the hull and AWLCRAFT for the superstructure  
Metallised paint as extras

### WORKMANSHIP

Electric welding shall be properly performed by CS certified and experienced welders, to the best yacht’s building standards.

Finished shell and deck plating to shall be fair and smooth.

Fairness of the hull / superstructure plating (on the 90% of the total surface), before any filler is added, shall be such that a stiff even batten 2 meter in length (2mm x 25mm x 2.000mm) can be held against the hull surface with less than 9 mm and against superstructure surface with less than 8 mm of clearance at any point. For avoidance of any doubt the measurement shall be taken in between two welding of the edges of the plates.

### OTHER TECNICAL INFORMATION

- 1 anchors 35 kg , chain 8/10 mm.
- 1 windlass with warping ends MZ Elect. ( 1.7 kw )
- 2 capstans MZ Electr. (1.2 KW each)

- Electro hydraulic telescopic gangway by BESENZONI model , size not less than 2.80 x 0,45 m, teak wood grating and stainless steel stanchions, hand-fitted or retractable
- Folding Handrails and check rails of polished 316 L stainless steel squared/rounded pipes
- Sanitary system vacuum. WC - type PLANUS, independent vacuum operation and fresh water feeding ( see on catalogue )
- Grey water flushed to PLANUS s/steel box, one in each compartment
- Bilge/Antifire Pump GIANNESCHI ACB 80 E + N°2 GIANNESCHI Mini Sub 3700
- Sewage water Pump GIANNESCHI MV44 24 v.
- Fresh Water Double Pumps GIANNESCHI Ecoinox 1 CE 24v+220v
- Hot water circulating Pump GIANNESCHI UP 20-30N 220 v
- Air Conditioning Pumps GIANNESCHI N°1 CP30 220 v + N° 1 CB 22-95 220 v

### AIR CONDITIONING AND VENTILATION

- Air conditioning 42.000 BTU (cooling/heating) in all cabins. Main unit fitted in engine room, One A/C fan coil fitted in the engine room and in the instruments box in the wheelhouse
- Mechanical ventilation exhaust: toilets and engine room
- Engine Room Ventilation Gianneschi

### ELECTRICAL SYSTEM

All electrical equipment, wiring, fixtures etc and its installation shall be in accordance to the Classification Society rules

220 V AC mono-phase system – 24 V DC / 50 Hz system.

1.500 W MASTERVOLT inverter to supply power to the 220V plugs

2 main sets of batteries (600A / 24VDC service and 240A / 24VDC for engines start + 1 battery 60 A for gen set starting)

Led spot lights BCM in all cabins

Anti intrusion alarm ( Provision only )

### ELECTRONIC EQUIPMENT

- Echosounder Furuno Multi FI 50
- Volvo Automatic NAVPilot
- Furuno GPS Antenna for GP-33
- Furuno VHF FM 4721
- N°2 monitors MFD 10" supplied from Volvo >Penta for engine monitorings and interfaces for Echosounder, autopilot and GPS
- Magnetic compass
- Controls of the bow thrusters ( Provision only )
- Control of navigation lights
- Control of Wipers

## ENTERTAINMENT AND COMMUNICATION EQUIPMENT

- Wheel House/Living:
  - 4 square in-ceiling speaker 5"
  - 1 Autoradio Sony
  - 1 32" LED TV monitor
  - Sintoamplifier with bluRay player
  - Decoder Sat HUMAX or similar high definition (Provision only)
  - Video on demand Apple TV (Provision only )
  
- Guest cabin:
  - Sintoamplifier 2.1 channel
  - LED TV 26" 16/9 FULL HD
  - Decoder Sat HUMAX or similar standard definition (Provision only)
  - 2 square in-ceiling speaker 5"
  
- Owner's Cabin:
  - Sintoamplifiers 2.1 channel
  - LED TV 26" 16/9 TV FULL HD
  - Decoder Sat HUMAX or similar high definition (Provision only)
  - Video on demand Apple TV
  - Sound distributed with 2 in-ceiling speakers 5"
  
- TV The satellite system: SEATEL antenna Mini ( Provision only)
  
- The reception Rf/Radio (AM/FM) is submitted a omni-directional Naval Antenna
- The reception of terrestrial TV is submitted by a Naval Mark 32 ALC antenna



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Furniture, fittings and layout will be according to the Contractual General Arrangement drawing which will be part of the building specification. All material to be used and all work to be carried out shall be of high quality and suitable for a yacht

**All furniture, fixtures and fittings , like handles, spot lights, bathroom hardware are indicated in the specific drawings or as it is.**

Marbles top in Owner's bathroom; marbles top in guest's bathrooms.

Internal loose furniture custom made by BSD's joinery

### GALLEY APPLIANCES

- NEFF oven/Microwave oven  
NEFF induction two fires electric cooking plate.  
SIEMENS Dish-washer compact (450 mm. )
- ARTINOX Wash basin
- FOSTER waste chute
- NEFF Refrigerator cell for totally 220 lts.
- 1 Deep freezer FRIGONAUTICA or FRIGOMAR made of S/STEEL for totally 100 lts.
- 1 icemaker FRIGOMAR or equivalent
- NEFF extractor fan

### MISCELLANEOUS

Other items included in the yacht:

1. External loose furniture
  - a. 2 folding chairs ( to chose on Benship catalogue )
  - b. 1 C shaped sofa ( aluminum custom cushions delivered loose )
  - c. 1 table (up to 6 people, foldable)
  - d. 1 aft sun pad with folding cushions in "Sunbrella" material
  - e. 1 fore sun pad with folding cushions in "Sunbrella" material (cushions delivered loose)
2. Mooring equipment ( mainly Mooring cleats and ropes see on catalogue NOTE: the fore mooring cleats should be of the retractable type- see on catalogue )
3. External aft door in wheelhouse deck
4. External front screen
5. Side wheelhouse windows
6. Partially Openable ceiling in wheel house



7. Custom Portholes

8. Stern underwater lights (2) ( Electrical Provision only )

9. Cockpit and walk around corridors linen in Teak 10 mm thickness

10. Tender garage under cockpit box ( tender supplied by Owner )

#### **ITEMS NOT INCLUDED IN THE SPEC (OWNER'S SUPPLY)**

- Diving equipment
- Tender and jet skies
- Bedroom outfits
- Galley linen
- Towels e bath towels
- Galley appliances
- Cutlery, glass, crockery
- Charts, electronic charts, nautical book, etc.
- First aid medicines
- Special Nautical equipment, chronometers, etc.
- Paintings, prints, antique carpets and art works or decorations

#### **SAFETY AND FIRE FIGHTING**

- 1 type approved self inflatable rafts for 10 people
- Type approved life jackets and other items like smoking rockets, in a quantity according to the requirements of the Classification Society of the Yacht

Fire fighting FM 200 system equipment installed according to the classification requirements and all equipments are in compliance with the Classification Society for this type of Yacht, including a self acting CO<sub>2</sub> fire fighting system in engine room.

#### **GENERAL TESTING AND DOCK TRIALS.**

All machinery, equipment, instruments and systems, installed under these Specifications shall be thoroughly tested by the shipyard to demonstrate satisfactory workmanship and suitability for the purpose intended and also that all requirements of the Specifications have been satisfactorily fulfilled.

The dock trials and check , under the control of CS Surveyor , shall include:

- Fire extinguishing system in engine room
- Fire extinguishing system in accommodation
- Emergency fire pumps
- Sewage and sanitary system

- Scuppers system
- Stern gangway
- Doors, windows, portholes hose test
- Stability test
- Alarms
- Communication equipment set-up
- Fire detection system
- Diesel-generators load
- Lighting
- Batteries and battery chargers
- Shore power
- Navigation lights

### **SEA TRIALS.**

After a satisfactory dock trials, the yacht shall proceed on sea trials, with Builder's ' Engineer and CS Surveyor present as required.

The yacht shall be crewed and under the command of Builder's master.

All costs, including manning, fuels, equipment and instrumentation, etc. shall be to the Builder's account.

The fuel remaining on board after the Builder's sea trials shall be paid by the Owner at the cost per liter that has been paid by the Builder.

Official sea trials shall be conducted under good weather conditions:

- Wind not exceeding Beaufort Scale 2, with wave height < 1 m
- Water with a depth of more than 50 m for maximum speed measurement
- Clean hull
- Half load

The displacement at sea trial shall correspond to the 50% load condition as defined at Par. 01-50, extra and option included. Liquid inside the tanks shall be adjusted to obtain that displacement and the even keel.

It shall be noted that all power, speed and range figures specified are based on a maximum air temperature of 35 °C and a maximum water temperature of 32 °C. Higher air and/or water temperatures may result in a reduction.

The official sea trial's , with CS Surveyor, schedule shall include:

- All auxiliary machinery to be run under normal service conditions
- Functional/capacity testing [and adjustments as necessary] of all equipment, instruments, and systems
- Anchor trials, proving that windlass can recover the weight of the total length of cable and anchor
- Compass calibration
- Progressive speed trials at 50% load displacement; at three different RPM of the main engines; for each speed a double run. All reading shall be recorded and made available to CS Surveyor.

- Maneuvering trials even using each engine separately
- Crash stop
- Steering and maneuvering with both engines and conduct turning and Williamson turns etc
- Endurance trial [0,25 hour at MCR]
- Engine ventilation system, functioning of temperature controls, air changes, etc., including balancing of whole system, with fresh air makeup

**All our short specifications are with reservation of in between changes**

*End of specification*