# **DP 72' TECHNICAL SPECIFICATIONS**

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N.B.: This is a preliminary technical document and may not under any circumstances be used for contractual purposes.

# 1- GENERAL SPECIFICATIONS

#### 1.1) MAIN DIMENSIONS

22.62 m Length o.a.: Hull length: 22.35 m Waterline length: 19.22 m Max. beam: 5.80 m Draft (full load): 1.17 m Diesel fuel tank capacity: 5000 I Freshwater tank capacity: 785 I 300 I Toilet water tank capacity: Waste water tank capacity: 250 I Craft displacement (full load): 54.4 † Craft displacement (dry and unladen): 45.8 †

#### 1.2) CLASSIFICATION

The yacht was designed and built in compliance with Directive 94/25/CE amended by Directive 2003/44/EC. This is a Class "B" craft.

## 1.3) **NAME**

The name of the yacht is DP 72'.

### 1.4) SPEED AND RANGE

The maximum speed is 34 knots.

The range at a speed of 27 knots is approximately 300 nautical miles.

### 1.5) CRAFT AND SUPERSTRUCTURES

# **CRAFT**

The craft is made of FG layered and reinforced in compliance with Directive 94/25/EC as emended by Directive 2003/44/EC. The craft is laminated using vinylester resin; the thickness is 20 mm at the hull and 15 mm on the bottom. The sides is laminated using PVC sandwich, density 75 kg/m³, 35 mm thick. The deck is laminated with a PVC sandwich, density 75 kg/m³, 40 mm thick. The total thickness of the lamination varies from 45 mm to 10 mm (the latter on the sides of the deck).

### **SUPERSTRUCTURES**

The deckhouse is also sandwich laminated; the total thickness varies from 10 to 30 mm. The main deck is covered with solid teak slats, thickness 12 mm, with black synthetic rubber seams. Deck is fastened to the craft by means of glue, stainless steel screws and FG bands.

# 1.76) SUBDIVISION

The yacht is divided into two decks as follows:

# NIGHT AREA (three berth version)

From bow to stern:

- Chain well.
- VIP berth with double bed, two wardrobe, drawers and mirror.
- VIP bathroom with toilet, bidet, washbasin, separate shower room, cabinets and drawers.
- Guest bathroom with toilet, bidet, washbasin, separate shower room, cabinets and drawers.
- Guest berth with two single beds on the same level provided, wardrobe, drawers.
- Large walk-in closet with containers.
- Ship-owner's berth all beam with large double bed, wardrobe, drawers and mirror.
- Ship-owner's bathroom with toilet, bidet, washbasin, separate shower room, cabinets and drawers.
- Crew berth with two beds (bunk beds), wardrobe and drawers.
- Crew's bathroom with toilet, bidet, washbasin, shower, cabinets and drawers.
- Kitchen with steel worktop, pyroceram cooker, oven, dishwasher, refrigerator/freezer, top-load washing machine, microwave oven, and crew dining area.
- Bookshelves along staircase well.

- Aft garage for tender.

## DAY AREA

From bow to stern:

- Docking area complete with capstan, kedge, bollards (2), fairlead integrated in pillar, anchor pillar and peaks.
- Sundeck with fender housing.
- Fore cockpit: service unit on left-hand side, with sink, small refrigerator and dustbin, tables, second helm.
- Main helm, bar, dining area for 6/8 people, lounge with entertainment corner.
- Aft cockpit: shoe holders on the right, unit with sink and dustbin on the left, large sundeck, table and two folding chairs.

### 2 - OUTFITTING

# 2.1) DECK PANELLING

The cockpit and the bridge will be panelled with solid teak slats, 45 mm width, with a total thickness of 12 mm and 4 mm gaps. The partners will also be made of solid teak, 12 mm thick, 70 mm wide. The tore of the steps will be reversed (30 mm).

### 2.2) EXTERNAL COLOUR

Both the hull and the superstructures will be <u>ivory</u>. Other colours are optional.

#### 2.3) INSULATION AND SOUNDPROOFING

Insulation and soundproofing is achieved by installed a structural bulkhead separating the engine room with a total thickness of 68 mm consisting of a composite/sandwich of ISOMAR + ISOPHON on both sides (14+40+14); Isophon composite skin (6/5 layers + 2 + 6/5 layers) and exterior made of Okoumè plywood and special EPDM rubber core. Stiff PVC 75 kg/m³ core (40 mm thick), 14 mm of Okoumè marine plywood + EPDM 40 mm + 14 mm of Okoumè marine plywood). The entire engine room will be covered with ISOFON soundproofing material plus CDM ISO TM, in turn covered with marine plywood and perforated plate

## 2.4) SAFETY AND FIRE-FIGHTING EQUIPMENT

All the equipment envisaged by the currently applicable standards for Class "A", including automatic  $CO_2$  fire extinguishing system in engine room. Self-inflating rafts (2 x 8 persons each, for a total of 16 places).

#### 2.5) LIFTING MEANS

One aft crane for hauling and launching tender and jet-ski (Besenzoni model G 333, maximum capacity 400 kg, reach 2.50 m).

## 2.6) GANGWAY AND BATHROOM LADDER

Stern:

- one 3.5 m long tilting gangway equipped with teak grating and foldaway stanchions, supplied by Besenzoni model PI 381 Sprint Inside

 one retractable electrical bathroom ladder accommodated in watertight compartment towards the inside of the craft, supplied by Besenzoni model SI 401 I Big Marea.

## 2.7) MOORING EQUIPMENT

The yacht equipment includes:

# **BOW**

- Two stainless steel 320x160 bollards.
- Two custom-designed stainless steel fairleads.
- One Lofran's anchor capstan, bell diameter 104, chain capstan 12 mm diameter, Titan A2000W with control box.
- One 50 kg Delta anchor with 100 m of galvanised chain, diameter 12 mm fitted on stainless steel pillar.
- 30 metres of blue 18 twisted mooring rope.

### **AMID SHIP**

- Two bollards, in stainless steel hawsehole, on each side.

### **STERN**

- Two stainless steel 320x160 bollards.
- Two stainless steel fairleads.
- Two 1500 W Lofran's Capstan T100 polished aluminium warp capstans with electrical panel and electrical control.
- 40 metres of blue 18 twisted mooring rope.

#### 2.8) MANOEUVRES

The craft is governed by means of two Radice model 38/35P rudders made of V.174 and AISI 316 stainless steel actuated by a power-assisted helm. The evolution times and angles are those specified in the standards and envisaged by Directive 94/25CE, emended by Directive 2003/44/EC. Two electrically controlled thrusters are provided (Side Power SP 240 TCi Bow Thruster and Side Power SP 240TCi Stern Thruster).

#### 2.9) FENDER BAR AND LIFELINE

Stainless steel fender bar, with EPDM shock-absorbing internal support along the entire stringer line and turning around tails. Stainless steel lifeline around side promenades and bow washboard according to current standards, with vertical stainless steel stanchions (30 mm diameter) and 40 mm handrail. A pulpit is envisaged on the bow with stainless steel slanted stanchions (30 mm diameter) and handrail (40 mm).

## 2.10) PORTHOLES AND WINDOWS

The portholes will be of SCM type with stainless steel frame, transparent glazing. The side windows will be made of 'Grigio Europa' colour glass. The windscreen will be made of transparent glass. The helm windows will be provided with two wipers.

### 2.11) **DOORS**

The engine room door is watertight. The lounge door is consists of four segments with sliding doors. The VIP berth is provided with a skylight that doubles as escape route. The craft is accessed through two AISI 316 stainless side gates astern.

# 3 - APPARATUSES AND SYSTEMS

### 3.1) DESALINATION PLANT

A High Pressure 140 litre/hour reverse osmosis desalination plant is installed.

### 3.2) FRESHWATER SYSTEM

The system is supplied by a 790 litre structural tank. Pressure in the system is ensured by two sequential Gianneschi & Ramacciotti model Eco-Jet 2B autoclaves. Direct connection to the mooring dock mains exploits the pressure of the land water mains. Two 80 litre boilers with recirculation pump are included.

### 3.3) WASTE WATER AND TOILET WATER SYSTEM

All water from the showers, washbasins, kitchen and fan-coil condensers will be collected in the structural 310 litre capacity waste water tank. The waste water tank is emptied using a pump arranged near the tank (either automatic or manually controlled from the helm). The toilet works with freshwater. The sewage is conveyed to the 250 litre capacity sewage waste tank. Sewage may be dumped by means of pumps (manually operated). Flanges for connecting to the mooring dock sewers are provided.

#### 3.4) BILGE SYSTEM

The system fits an electrical bilge pump, either manually or automatically controlled by means of a float sensor with alarm. The number of pump complies with the current laws.

## 3.5) AIR CONDITIONING AND BATHROOM VENTILATION SYSTEM

The air conditioning system of the fan-coil type, fed by a Condaria PCWM/FCL 18002, 72000 BTU/h cooler. All pipes are insulated and the fan-coils are provided with condensation traps. The fans are quiet and speed can be adjusted by means of controls conveniently positioned in ship-owner's berth and bathroom. All bathrooms, including the crew's bathroom, are equipped with quiet, functional fans which are operated by means of a specific switch and switch off automatically after approximately three minutes.

# 3.6) ENGINE ROOM VENTILATION/EXTRACTION SYSTEM

The engine room is dynamically forced ventilated by means of two air intakes (one upper vent on deckhouse, window arch, and one the lower side, deckhouse base on deck). A portion of the intake air is used as combustion supporting air by the main engines, the rest of the flow is used to cool the environment. Two extractors, also arranged in the engine room (Feith EEL/R 450/2) force hot air extraction from the room through openings astern on the external side of the washboard. The latter are protected by specific bulkheads.

## 3.7) ELECTRICAL SYSTEM

The system, made in accordance with UNI and CEI standards, is approved and tested by the classification register.

On-board working voltages are:

- 24VDC for e.m.f. circuits and lights,
- 220VAC via inverter for small e.m.f. circuits and 12VDC for generators,
- 24VDC for main engine starter circuits.

The electrical wires are installed in light alloy UNAV gangways and closed self-extinguishing PVC ducts. All on-board apparatuses are connected to earth via appropriate dimensioned channels and copper sheaths.

# 3.8) POWER SOURCES

### **GENERATORS**

Two Kohler 13 kW/h Diesel generators are installed. The generators are mounted on 'silent blocks', provided with control panel and separate fume/water exhaust for soundproofing purposes. The power was calculated so that one single generator can power all available loads at the same time. The main diesel engine alternators are also used to generate electrical power for recharging the service batteries and the starter batteries.

#### **EARTH POINTS**

Two 50 Ah earth points are positioned astern on the right side in specific recesses on the step risers.

#### **BATTERIES**

The following batteries are installed:

- Two 12V 105 Ah for starting power generators
- Four (2x12V) 105 Ah for starting motors
- Ten (2x12V) 105Ah for powering utilities.

The battery chargers are made by MASTERVOLT and installed as follows:

- Two for 100 A utilities
- One for 100 A motors
- One for power generators (25A, two outputs).

# 3.9) ELECTRICAL PANELS

The main electrical panel is installed in the lounge on the right side of the helm. A sub-panel is installed in the crew's berth. Alternators may be controlled and protected in parallel, in addition to all the other features needed to ensure control and safety of the various loads. The distribution panels are arranged, as much as possible, near the respective loads and apparatuses. The navigation light panel is installed at the helm and inserted in the control room panel with digital load and voltage indicators.

### 3.10) LIGHTING

The internal lights are appropriately positioned to provide sufficient illumination employing 24VDC marine type lamps. Optical fibre external courtesy are fitted along the internal side of the washboard along the external walkway.

# 3.11) FUEL SYSTEM

The system consists of structural FG tanks with a total capacity of 5000 litres (two 600 litre side tanks in engine room and one 3800 litre tank amid craft) with ball valves connected by means of stainless steel pipes. The tanks are filled through two fuel fillers accommodated in specific hinged flap concealed recesses in level with the deck and check valve system.

## 4- ELECTRONIC INSTRUMENTS

### 4.1) NAVIGATION ELECTRONICS

- Raymarine ST 60 Tridata (fitted).
- Raymarine ST 60 Compass (fitted).
- Raymarine ST6001 Plus Autopilot control unit (fitted).
- Echo/Chart Plotter E120
- Raytheon E80 radar
- Magnetic compass
- Raymarine ST 60 Graphic (fitted).

#### 4.2.) COMMUNICATION ELECTRONICS

- Raytheon Ray 240 E VHF

### 4.3) ENTERTAINMENT

#### VIP berth

- 15" LCD television
- Decoder ready
- Sony MEX-RI radio DVD/CD player

#### Guest berth

- 15" LCD television
- Sony MEX-RI radio DVD/CD player

#### Ship-owner's berth

- Bose 3.2.1 Dolby Surround system with two subwoofers DVD CD and tuner (300W)
- 20" LCD television
- Decoder ready

# Crew's quarters

- Two 10" LCD televisions
- Sony MEX-RI radio DVD/CD player

# Lounge

- Teac Legacy 800 Dolby Surround system with Canton Movie 6 speakers, DVD CD player and tuner
- 26" LCD television
- Decoder ready

### **5 - PROPULSION AND ENGINES**

# 5.1) PROPULSION SYSTEM

Two CATERPILLAR C32 marine engines (2x1675HP) and two inverters in V-Drive ZF 2060V 10° configuration (ratio 2.467:1); two bronze propellers with four fixed blades, diameter 1000 mm; two stainless steel V.174 shafts; two resin-sealed Radice Otman stern tubes, RF 100 Fluiten front seal with respective o-rings and mechanical gaskets; two shaft struts with bushings.

# 6- FURNITURE

#### 6.1) GENERAL FURNITURE

The internal furniture of the rooms is shown in the general catalogue plans. Finishing will be defined in agreement with the ship-owner with the presentation of sketches and detailed plans of each room. In general, high quality furniture shall be used, with excellent finish, according to shipyard standards. The ship-owner may choose from the following woods: mahogany, teak, cherry, and pear, for the furniture and for all the tables in the craft, except for the crew's quarters. The lounge and ship-owner's berth will be made using the highest quality briarwood, such as walnut, maples, madrona. The ceiling are either upholstered with fabric and/or lacquered. The bathroom tops are made of marble and/or glass. The floors are carpeted or parquet, as the corridors, the service rooms and the stairs which may be made of wood. The bathroom floors may be either wood or marble. The crew's quarters are panelled with semi-glossy Formica panels and wooden trimmings; the floors are made of preformed wooden slats. The following appliance are provided:

#### KITCHEN

- One combined microwave oven
- One suction hood
- One dishwasher
- One four-hob pyroceram cooker
- One stainless steel sink
- One refrigerator/freezer

- One traditional oven
- One top-load washing machine

### LOUNGE

- One ice-maker
- One 80 litre refrigerator/bar
- One small washbasin

# FORE COCKPIT

- One small stainless steel washbasin
- One Frigonautica FRO 25C 400x300x490h top-load fridge
- One customised Trinox grill

#### AFT COCKPT

- One small FG washbasin

## 7- OUTFITTING AND EQUIPMENT

### 7.1) NAVAL EQUIPMENT

The following equipment is provided on deck:

- seawater chain washer
- freshwater hose for washing, positioned fore and aft
- 8 Poliform F.6 cylindrical fenders (length 1095 mm, diameter 300 mm) accommodated in specific peak under sundeck
- 2 Poliform A4 spherical fenders (diameter 600 mm) accommodated in specific peaks
- 30 metres of mooring rope, diameter 18, twisted blue, fore
- 40 metres of mooring rope, diameter 18, twisted blue, aft
- 2 telescopic boathooks accommodated in specific compartment
- 2 rafts for 8 people accommodated in specific compartment
- 1 light buoy accommodated in specific compartment
- 1 life belt with rope accommodated in specific compartment
- 1 extractable hot/cold water shower accommodated in specific compartment
- 2 freshwater fillers accommodated in specific compartments
- 1 sewage waste drains accommodated in specific compartment
- 2 fuel fillers accommodated in specific compartment

## 7.2) TENDER (OPTIONAL)

An inflatable tender with rigid hull 3.50 metres may be accommodated in a specific aft garage. A stainless steel hydraulic slide is provided to facilitate launching.

## 7.3) LIMBER HOLES

The deck and the bridge are provided with lumber holes in accordance with the standards in force and arranged so as to prevent stagnation of water in the corners. The limber holes are made of teak grid.

# 7.4) NAVIGATION EQUIPMENT

The fore external control station is hydraulically operated (Besenzoni T601). The following equipment is provided:

- 2 engine rpm meters
- 2 engine coolant temperature gauges
- 1 Marsili helm lever
- 2 electronic throttles
- 1 command for bow and stern thrusters
- 1 radio remote control for capstan
- flap controls
- 2 start/stop engine controls
- siren

# Main pilot station

The following equipment is provided in addition to the electronic instruments listed in paragraph 4.1.

- Start/stop switch for each engine.
- VP engine alarm buzzer.
- Diagnostic unit with display.

# Additional equipment:

- Synoptic panel with indicator LED and alarm.
- Bow thruster panel.
- Stern thruster panel.
- Flap switches (2).
- BCS flap angle indicator (2 instruments).
- Helm (diameter 600)
- Marsili rudder system.
- Backlit panel for searchlight.
- VDO 4432 Ocean Line water level gauge.
- VDO 4428 Ocean Line fuel level gauge.
- Screen for engine room camera and aft cockpit camera.
- Waste water high level alarm.
- Toilet water high level alarm.
- Panel with backlit buttons controlling the following devices:
  - Left, central, right wiper
  - Windscreen washer
  - Left, central right wiper speed adjustment
  - Siren
  - Capstan controls
  - Chain washer pump
  - Type-approved navigation lights control
  - Anchor lights control
  - Instrument light control
  - Left engine room bilge pump control
  - Right engine room bilge pump control
  - Left bilge pump

- Right bilge pump
- Left night area bilge pump
- Right night area bilge pump
- Service battery breaker
- Right engine battery breaker
- Left engine battery breaker
- Shunt
- Two pilot seats, Besenzoni President Sport, one electrically adjustable, one manual
- Fixed external fore pilot station
- Aft station with remote control for bow and stern thrusters

### 7.5) OTHER EQUIPMENT

- LAM fire detection and extinguishing system
- Valve shut-down remote control
- Ventilation shutter shut-down remote control
- Internal cordless telephone system
- FG underwater drains
- Electrically operated sliding hard top
- Stern Bimini Top
- Blinds over aft sundeck
- Besenzoni stern table/sundeck supports
- Stern steel gates
- Stern and bow sundeck upholstery
- Flaps
- Plates, glasses, cutlery and respective fastening blocks
- Centralised vacuum cleaner system
- Fire detection system in engine room
- Empty SAT antenna ball
- Centralised SAT TV antenna
- Electronic maps of Italy

## 7.6) EXTRA EQUIPMENT (OPTIONAL)

- Waste waster and sewage treatment system (Ecomar)
- Burglar alarm
- Underwater lights
- 130HP jet-ski
- 3.5 m, 80HP tender
- Spare shaft
- Spare propellers
- Mosaic bathroom tiles
- Third bed in guest berth