RO-RO Cargo Vessel

27,000 DWT

The vessel is RO-RO ship suitable to carry containers, trucks, trailers, general cargo and cars and vans on hoistable deck. Cargo space is divided into two (2) forward cargo holds with 40° cellguides and one (1) cargo space divided with decks into three (3) garages, and cargo space on weatherdeck with container fittings.

Double bottom and side arranged for ballast water, HFO and antifouling tanks.

The ship’s hull is specially equipped for in-water surveys.

Engine room is equipped for unmanned operation.

Classification: BV

I-4-HULL-6-MACH
RO-RO cargo ship, equipped for carriage of containers
Unrestricted navigation
-6-0IT-UMS-0-SYS-NEQ1
MON-SHAFT, INWATER SURVEY

Length overall (extreme) 211.60 m

Length between perpendiculars 190.00 m

Breadth, moulded 32.20 m

Depth, moulded to weather deck 22.70 m

Design draught (extreme) 10.50 m

Deadweight at design draught 26,700 t

Main engine 3. MAJ - WÄRTSILÄ NSD 9 RT-flex 60C

CMCR 21,780 kW/114 min-1

Trial speed with 19116 kW (90% CMCR) at design draught 19.8 knots

Capacities

Total deck area (excl. car decks) 12,100 m²

Car decks area 7,800 m²

Car capacity (ramps excl.) 1,990 units

Trailer lane 3,850 m³/3.0 m

3,040 m³/3.5 m

2,130 TEU

Containers (geometric) 2,130 TEU

Refrigerated containers 150 FEU on weather deck

Tank capacity (100%)

Fuel tanks 8,000 m³

Heavy fuel oil 3,000 m³

Diesel oil 350 m³

Lubrication oil 75 m³

Fresh water 350 m³

Consumption of HFO 92.5 t/day

Cruising range 11,200 nautical miles

Crew complement 40 + 6 Suez crew

Painting: Epoxy

Cargo equipment

- Stern quarter ramp: 46.5 m (incl. flap) x 12.0 m/250 t capacity, four (4) wheels axle load 60 t
- Stern door: 27.0 m x 7.0 m
- Car decks:
  2A – area abt. 2300 m² eleven (11) hoisting panels
  3A – area abt. 3480 m² seventeen (17) hoisting panels, starboard aft panel use as ramp
- Fixed ramp – lower deck to tank top: 28.3 m x 8.0 m with gastight hydraulically operated ramp cover
  - middle deck to lower deck: 37.4 m x 12.0 m with watertight hydraulically operated ramp cover
  - middle to weather deck: 53.4 m x 8.0 m with watertight hydraulically operated ramp cover
- Recessed into fixed ramp (middle to lower deck) hydraulically operated ramp for car deck 2A of 28.0 m x 6.0 m
- Permissible loadings:
  - tank top 10 t/m², four wheels axle load 60 t
  - lower deck 3 t/m², four wheels axle load 60 t
  - middle deck 3 t/m², four wheels axle load 60 t
  - weather deck 6 t/m², four wheels axle load 60 t
  - car deck 0.3 t/m², two wheels axle load 1.6 t
- Deck cranes: two 3. MAJ /FL0028 MacGregor el. hydraulic cranes 450 kW SWL, at 32 m.
- Ventilation:
  - Exhaust mechanical ventilation system with 20/10 ch/h for RO-RO space

Auxiliary engines plant

Four diesel generator sets, abt. 1,500 kW each.
One emergency diesel generator set abt. 240 kW
**RO-RO Car Container Carrier**

**26,200 DWT**

Builder / Yard No.: Shellard ULJANIK / 472-476, 482, 483
Name: Pr. No. 10304
Owner / Flag: Grimaldi Compania di Navigazione / Italy
Designed by: Shellard Uljanik
Delivered: Exp. 2008, 2009

**Classification:** RINA-Ex Ro-Ro Cargo ship, unrestricted
- 6-AUT-UMS, 6-SYS-NEQ 1, In-water survey, MON-SHAFT

**Length, overall** max. 210.00 m
**Length, btw perp.** 196.80 m
**Breadth, moulded** 32.26 m
**Depth, moulded** 21.53 m
**Depth to freeboard deck** 13.34 m
**Draught, design** 9.40 m
**Draught, scantling** 9.75 m
**Deadweight at design draught** abt. 24,400 t
**Deadweight at scantling draught** abt. 26,200 t

**Main engine:** ULJANIK/MAN-B&W; 8S60MC-CMCR: 19,040 kW at 105 RPM

**Trial speed at 90% MCR, on draught of 9.4 m** 21.9 knots

**Capacities**
- Garage area abt. 38,000 m²
- Number of cars (4,125 x 1,550) abt. 3,260
- Number of containers (TEU) abt. 1,320
- Lane meters (3 m) abt. 3,950

**Provisions**
- Heavy Fuel Oil 3,590 m³
- Diesel oil 570 m³
- Lubricating oil 215 m³
- Fresh water 370 m³
- Water ballast 14,800 m³
- Consumption HFO: 73.6 t/24 hours
- Cruising Range: abt. 23,000 n.m.
- Crew Complement: 30 persons

**Ship equipment**
- Stern port with stern ramp, SWL 250.0 t, clear opening 12.0 x 6.30 and ramp with flap of 8.5 x 32.20
- Fixed and adjustable internal ramps.
- One el. driven bow thrusters of abt. 1.00 kW
- One el. driven stern thrusters of abt. 1.000 kW
- Six double drum el. driven mooring winches, pull 20.0 t.
- Hold ventilation with electro driven fans.
- Two el. driven ballast pumps, cap. 750 m³/h at 2.5 bar each

**Steam plant**
- One combined Oil fired/exhaust gas boiler, steam capacity 2,500/1,500 kg/h at 7 bar.

**Auxiliary engines plant**
- One shaft generator of abt. 1,400 kW
- Four diesel generator sets of abt. 1,180 kW
- One emergency diesel generator of 160 kVA

The vessel is suitable for world wide transport of cars and trucks on twelve cargo decks, of which two are hoistable decks. It is divided by watertight bulkheads forming fore peak, deep tank, cargo holds, engine room and after peak and by two water/gas tight decks.

The hull structure is designed to the following permissible loading and with following clear heights:

<table>
<thead>
<tr>
<th>Deck No.</th>
<th>Clear height (mm)</th>
<th>Uniform load (t/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5,650</td>
<td>8.0</td>
</tr>
<tr>
<td>2</td>
<td>4,000</td>
<td>2.0</td>
</tr>
<tr>
<td>3</td>
<td>2,100</td>
<td>3.0</td>
</tr>
<tr>
<td>4</td>
<td>1,700/210</td>
<td>0.17</td>
</tr>
<tr>
<td>5</td>
<td>1,700</td>
<td>0.17</td>
</tr>
<tr>
<td>6</td>
<td>6 fore - 2,300</td>
<td>2.3</td>
</tr>
<tr>
<td>7</td>
<td>2,300</td>
<td>0.3</td>
</tr>
<tr>
<td>8</td>
<td>2,100</td>
<td>0.3</td>
</tr>
<tr>
<td>9</td>
<td>2,100</td>
<td>0.25</td>
</tr>
<tr>
<td>10</td>
<td>2,000</td>
<td>0.2</td>
</tr>
<tr>
<td>11</td>
<td>2,000</td>
<td>0.2</td>
</tr>
<tr>
<td>12 * (top garage)</td>
<td>0.17</td>
<td></td>
</tr>
</tbody>
</table>

Deck TEU stack /load t
- 1: 60.0
- 3: 48.0
- 6 fore: 40.6
Car Truck Carrier

7,000 cars

Builder: Shipyard ULJANIK
Owner / flag: Bahamas
Project No. 11303
Designed by: Shipyard ULJANIK

Classification: DNV, 1A1, Car carrier, RO-RO, EO, NAUT-OC, TMON

Length, overall: 199.90 m
Length, btw perp.: 188.70 m
Breadth, moulded: 32.26 m
Depth, moulded: 32.31 m
Draught, design: 8.00 m
Draught, scantling: 8.80 m
Deadweight at design draught: 12,800 t
Deadweight at scantling draught: 16,600 t
Main engine: ULJANIK/MAN-B&W, 9S50MC-S
MCR: 14,220 kW/127 RPM
Trial speed at 90% MCR, on draught of 8.00 m: 20.8 knots

Capacities

Garage area: 58,819 m²
Number of cars: 7,000

Provisions

Heavy Fuel Oil: 3,450 m³
Diesel oil: 210 m³
Lubricating oil: 150 m³
Fresh water: 190 m³
Water ballast: 5,300 m³
Consumption HFO: 54.2 t/24 hours
Cruising Range: 25,500 n.m.
Crew Complement: 32 persons

Ship equipment

• Stern port with stern ramp, SWL 100.0 t, clear opening 10.1 x 5.1 and ramp with flap of 7.50 x 32.20.
• Side port with ramp, SWL 20.0 t, clear opening 5.5 x 6.5 and ramp with flap of 6.5 x 22.
• Sliding and pivoting water/gas tight doors.
• Fixed and adjustable internal ramps.
• One el. driven bow thrusters of abt. 900 kW.
• One el. driven stern thrusters of abt. 900 kW.
• Six double drum el. driven mooring winches, pull 25.0 t.
• Hold ventilation with electro driven fans.
• Two el. driven ballast pumps, cap. 350 m³/h at 1.5 bar each.

Steam plant

• One Oil fired boiler, steam capacity 2,000 kg/h at 7 bar and one exhaust gas boiler, steam capacity 1,000 kg/h of 7 bar.

Auxiliary engines plant

• Three diesel generator sets of abt. 1,490 kW.
• One emergency diesel generator of 160 kW.
### Ro-Pax Vessel

3,500 LM / 400

**Classification:** DNV-1A1, Ice 1A*, Class A, EB, NAUT-OC, COMP-VI2, LCS (D, I, S), TMغن

The vessel is suitable for wide transport of passengers cars and trucks on three cargo deck and on weather deck.

<table>
<thead>
<tr>
<th>Length over all (m)</th>
<th>199.80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length btwPerp (m)</td>
<td>184.60</td>
</tr>
<tr>
<td>Breadth moulded (m)</td>
<td>29.80</td>
</tr>
<tr>
<td>Depth moulded (m)</td>
<td>16.50</td>
</tr>
<tr>
<td>Depth to freeboard (m)</td>
<td>9.90</td>
</tr>
<tr>
<td>Draught design (m)</td>
<td>7.40</td>
</tr>
<tr>
<td>Draught scantling (m)</td>
<td>7.50</td>
</tr>
<tr>
<td>Deadweight at design (t)</td>
<td>9,000</td>
</tr>
<tr>
<td>Main engines: Service speed at 85% MCR, 15% SM, 4x4,500 kW/500 rpm on draught of 7.46 m, 24.00 knots</td>
<td></td>
</tr>
</tbody>
</table>

**Heating plant**
Two oil fired boilers, steam capacity 2 x 3,200 kg/h at 7 bar
Four exhaust gas economisers of 1600 kg/h, 7 bar steam

**Auxiliary engines plant**
- Three diesel generators sets of abt. 2,000 kVA
- One emergency diesel generator set of abt. 700 kVA
- Two shaft generators of abt. 2,900 kVA

**Ship's equipment**
- Stern port with ramp 21.0 x 15.0 m.
- One hoistable ramp 24.5 x 2.65 m.
- Watertight cover flush with main deck 55.0 x 3.5 m.
- Two fixed internal ramps.
- Two el. driven bow thrusters of abt. 1,500 kW each and two in the stern abt. 800 kW each.
- Antifouling and stabilisation equipment.
- Two double drum mooring winches, pull 16 t and four single drum mooring winches, pull 16 t.
- Hold ventilation with electro driven fans.

**Provisions**
- Heavy fuel oil 1,000 m³
- Diesel oil 200 m³
- Lubricating oil 100 m³
- Fresh water 600 m³
- Ballast water 3,500 m³

**Cruising Range:** 6,000 n.m.

**Crew Complement:** 37 persons
RO-PAX
3,000 lm

Length over all 193.10 m
Length btw perp. 180.00 m
Breadth moulded 29.80 m
Depth moulded to upper deck 17.10 m
Depth to freeboard deck 11.20 m
Draught design 7.50 m
Trial speed at 13,440 kW + 4 MW Active rudder, on draught of 7.50 m 24.5 knots

Passenger / cabins 1,400 / 350
Passenger in aircraft seats 200
Lane meters 3,000 m
Provisions: Heavy Fuel Oil 860 m³
Diesel oil 440 m³
Lubricating oil 150 m³
Fresh water 1,000 m³
Grey water 600 m³
Water ballast 2,800 m³
Consumption HFO: 92 t/24 hours
Cruising Range: 7,400 n.m.
Crew Complement: 200 persons

The vessel is suitable for worldwide transport of passengers, trailers and cars. Cargo area will consist of three decks for trailers and one separate deck for cars/vans. Structural arrangement to be based on longitudinal framing system with transversally framed side shell. The hull structure is designed to the following permissible loading and with following clear heights:

<table>
<thead>
<tr>
<th>Deck No.</th>
<th>Clear height (mm)</th>
<th>Uniform load (t/m²)</th>
<th>Axle load (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4700</td>
<td>4</td>
<td>15/4</td>
</tr>
<tr>
<td>2</td>
<td>2300</td>
<td>0.3</td>
<td>2/2</td>
</tr>
<tr>
<td>3</td>
<td>4700</td>
<td>3</td>
<td>15/4</td>
</tr>
<tr>
<td>4</td>
<td>4700</td>
<td>1.5</td>
<td>15/4</td>
</tr>
</tbody>
</table>

Access
- Stern ramp, SWL 100.0 t, 12 x 27 m
- Internal fixed ramp to upper deck, 36 x 6 m
- Internal fixed ramp to top/deck 2,55 x 3,6 m
- Ramp cover, 34 x 3,8 m.

Machinery
- Main engine Uljanik/MAN-B&W 9S50MC-C Mk-8 14,940 kW / 127 rpm.
- Aux. Engines 4 x 2,000 kW.

Propellers / thrusters
- One fixed pitch propeller dia 5.9 m.
- One active rudder / propeller dia 4.0 m.
- Two bow thrusters of abt. 1,000 kW each.
Car-Truck Carrier

4,900 cars

The ship is roll on/roll off car & truck carrier, suitable to carry passenger cars, pickup vans, container loaded on MAFI trailers and trucks, built for unrestricted ocean services notation in worldwide service. The vessel is single-screw diesel propulsion unit with engine room located aft. Cargo area below freeboard deck consists of four compartments (holds). Cargo area includes 11 decks, two of them hoistable, one with one working position and one with two working positions. Parking area is for abt. 4,870 standard cars regardless of the orientation (longitudinal or transverse). The accommodation is arranged forward. One bow thruster abt. 1,000 kW is provided.

The ship’s hull is specially equipped for in-water surveys. Engine room is equipped for unattended operation.

Classification: GERMANISCHER LLOYD

LENGTH

Length overall 176.02 m
Length between perpendiculars 165.00 m
Breadth, moulded 31.10 m
Depth, moulded to upper deck 30.00 m
Design draught 7.70 m
Deadweight at design draught (7.70 m) 8,400 t
Summer draught 8.75 m
Deadweight at summer draught (8.75 m) 12,300 t

MACHINERY

Main engine 3. MAJ – WÄRTSILA 7 RT-flex 50 CMCR 11,060 kW/124 min-1
Trial speed with 9554 kW (90% CMCR) at design draught of 7.7 m 20.4 knots

CAPACITIES (100%)

Net parking area 41,538 m²
Ballast tanks 3,891 m³
Heavy fuel oil 3,030 m³
Diesel oil 159 m³
Lubrication oil 109 m³
Fresh water 215 m³
Consumption of HFO 43 t/day
Cruising range 30,000 nautical miles
Crew complement 22 + 2 Suez crew
Painting: Cargo holds – epoxy
Ballast tanks – light colour epoxy

CARGO EQUIPMENT

For loading/unloading of ship one stern/quarter ramp-door, capacity 20 t SWL and one side ramp-door, capacity 20 t SWL, are provided. Set of internal fixed ramps, watertight/gastight doors is provided giving access to fixed and hoistable decks within holds. The ramps, flaps and doors are electro-hydraulically driven. Hoistable car decks shall be lifted by means of Mobile Deck Lifters.

• Open ventilation system for holds.
• One electro-hydraulic deck crane, 4 t SWL.

STEAM PLANT

• One oil fired boiler, steam capacity abt. 2.5 t/h at 7.0 bar
• One exhaust gas boiler, steam capacity 1 t/h at 7.0 bar

AUXILIARY ENGINES PLANT

• Three main diesel generators, 1215 kW each/900 min-1
• One emergency diesel generator, 165 kW/1800 min-1

The shipyard:
Shipyard 3. MAJ / 705
Name: STX BLUEBIRD
Owner / Flag: NSC/Liberia
Designed by: Shipyard 3. MAJ
Sister ships: 705, 706, 707
Delivered: 2008

The shipyard:

The shipyard is a member of the Chinese State Shipbuilding Corporation (CSSC) group.

The shipyard has a long history of building ships for the container market and offers a wide range of services including design, engineering, construction and shipyards. The yard has state-of-the-art facilities and has been awarded ISO 9001 certification.

The shipyard is located in the port of Rijeka, Croatia and has a workforce of over 1,500 employees.

For more information, please visit the shipyard’s website: www.shipyard3majs.com
Car Truck Carrier

4,900 cars

Builder / Yard No.: Shipyard ULJANIK / 477, 478
Owner / flag: Bahamas
Designed by: Shipyard ULJANIK
Project No.: 11903 B

Classification: 1 A1, "CAR CARRIER", RO/RO, E0, NAUT-OC, TMON

<table>
<thead>
<tr>
<th>Deck No.</th>
<th>Clear height (mm)</th>
<th>Uniform load (t/m²)</th>
<th>Axle load (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1850</td>
<td>0.25</td>
<td>1.2/2</td>
</tr>
<tr>
<td>2</td>
<td>2000</td>
<td>0.25</td>
<td>1.2/2</td>
</tr>
<tr>
<td>3</td>
<td>2000</td>
<td>0.25</td>
<td>1.2/2</td>
</tr>
<tr>
<td>4</td>
<td>2100/4000</td>
<td>1.0</td>
<td>10/4</td>
</tr>
<tr>
<td>5</td>
<td>2000/0</td>
<td>0.3</td>
<td>1.6/2</td>
</tr>
<tr>
<td>6</td>
<td>900/1250/5000</td>
<td>2.0</td>
<td>50/4</td>
</tr>
<tr>
<td>7</td>
<td>2200/1850/00</td>
<td>0.3</td>
<td>1.6/2</td>
</tr>
<tr>
<td>8</td>
<td>2400</td>
<td>0.3</td>
<td>1.6/2</td>
</tr>
<tr>
<td>9</td>
<td>2100</td>
<td>0.25</td>
<td>1.2/2</td>
</tr>
<tr>
<td>10</td>
<td>2000</td>
<td>0.25</td>
<td>1.2/2</td>
</tr>
<tr>
<td>11</td>
<td>1700</td>
<td>0.20</td>
<td>1.2/2</td>
</tr>
</tbody>
</table>

Length overall 176.00 m
Length btw perp. 165.00 m
Breadth moulded 31.10 m
Depth moulded 30.00 m
Depth to freeboard deck 14.50 m
Draught design 7.70 m
Draught scantling 8.75 m
Deadweight at design draught 8,300 t
Deadweight scantling draught 8,300 t
Main engine: ULJANIK/MAN-B&W; 8S50MC-C, 12,640 kW/127 RPM

Trial speed at 90% MCR, on draught of 7.70 m 20.8 knots

Capacities

- Garage area 40,755 m²
- Number of cars (4,125 x 1,550) 4,844
- Provisions: Heavy Fuel Oil 4,553 m³
- Diesel oil 200 m³
- Lubricating oil 150 m³
- Fresh water 180 m³
- Water ballast 4,000 m³
- Consumption HFO 48.2/24 hours
- Cruising Range: 33,000 n.m.
- Crew Complement: 36 persons

The vessel is suitable for world wide transport of passenger cars and trucks on 11 cargo decks, of which two are hoistable decks. Cargo area below freeboard deck will consist of two compartments, divided from each other by watertight bulkhead. Cargo area will have 11 decks for vehicle stowage while decks no. 5 and 7 will be hoistable. Decks no. 4 and 6 will be reinforced for stowage of trucks. Structural arrangement to be based on longitudinal framing system with transversally framed side shell.

The hull structure is designed to the following permissible loading and with following clear heights:

- Stern port with stern ramp, SWL 120.0 t, clear opening 7.50 x 5.20 and total length of 32.20 m and clear width 7.5 m.
- Side port with ramp, SWL 20.0 t, clear opening 4.20 x 5.2 and total length of 22.0 m and clear width of rampway of 4.20 m.
- Pivoting water/gas tight doors.
- Fixed internal ramps with movable flaps.
- Fitted internal ramps with movable flaps.
- one el. driven bow thruster of abt. 1,000 kW.
- One el. driven stern thruster of abt. 800 kW.
- Six double el. driven mooring winches, pull 25.0 t.
- Hold ventilation with electro driven fans.
- Two el. driven ballast pumps, cap. 350 m³/h at 1.5 bar each.

Steam plant

- One Oil fired boiler steam capacity of 2,500 kg/h at 7 bar.
- One Exhaust gas boiler, steam capacity 1,000 kg/h at 7 bar.

Auxiliary engines plant

- Three diesel generator sets of abt. 1,490 kW.
- One emergency diesel generator of 210 kW.
FRANS SUELL is a modern Car passenger ferry intended for the short international voyages and built according to highest Scandinavian standards for such type of vessel, vertically divided into 12 decks from the tank top to the wheel house level. Deck No. 3 and husitable deck No. 4 are arranged for the loading of cars and lorries through the stern and bow ramps. Main car deck No. 3 is divided into 8 lanes. The propulsion is achieved by two shafts fitted with CP propellers and driven by twin coupled medium speed diesel engines.

Auxiliaries

- four electric generators, diesel driven 4 x 500 kW/750 rpm
- two oil fired steam boilers 2 x 5 t/h at 7 bar
- one exhaust gas heated, steam economiser 1 x 8 t/h at 7 bar
- two sedge burning steam boilers

CP propellers, two rudders fitted with hydraulically driven rotor and two bow thrusters are making the vessel exstremely manoeuvrable inthe restrictied waters of the Baltic sea.

Antiheeling tanks system and fife stabilisers are used during load- ing/unloading operations and sailing of the vessel.

Hull structure is made of mild and high tensile steel and aluminium above 10th deck level, utilizing the light weight in accordance with the strict requirements for the vessel’s draft and stability.

Accommodation is mainly divided into cabin area, built and in-stalled in prefabricated modular blocks, and passenger’s public areas such as high class restaurants, self service restaurants, huge shopping area, conference room and auditorium, disco club, night club, pubs, etc.

The biggest and most attractive are:

- Oriental restaurant 82 seats
- Night club 509 seats
- A la Carte 206 seats
- Buffet 466 seats
- Banquet 82 seats
- Pub 115 seats
- Disco club 184 seats

In addition to the above, different larger and smaller conference rooms are furnished with more than 300 seats, the biggest of which is Auditorium with 150 sitting places. The most modern audio visual and other equipment is fitted, giving to the ship a large number of attractive facilities.
RO-RO Vessel

1,200 lmt

FERRIES & RO-RO, YACHTS, HIGH SPEED BOATS

Builder: Shipyard ULJANIK
Project No.: 11906
Designed by: Shipyard ULJANIK

Classification: -1-100 A5 IN “RO RO Vessel”
Equipped for carriage of containers
Solas B-2, Reg 19-5-MC Rout

Length over all 156.00 m
Length btw perp. 150.00 m
Breadth moulded 21.00 m
Depth moulded 13.40 m
Draught moulded 5.40 m
Deadweight at moulded draught 6,800 t
Main engine: ULJANIK/MAN-B&W; 8S35ME-B, 6,960 kW/167 RPM
Trial speed at 90% MCR, on draught of 5.40 m 18.80 knots

Capacity
Nominal no. of trailers 145
Upper deck:
Containers 45' (two tiers) 100
Containers 40' (two tiers) 100
Containers (two tiers) 200

Provisions
Heavy Fuel Oil 550 m³
Gas oil 40 m³
Water ballast 4,300 m³
Consumption HFO: 27.4 t/24 hours
Effective cruising range: 21 day
Crew Complement: 33 persons

Deck No. Clear height
Tank top 4,800
Main deck 5,200
Upper deck 5,200
Accommodation 2,100
Wheelhouse 2,100

Ship’s equipment
- Stern ramp, SWL 120.0 t, clear opening 17.80 x 5.20
and total length of 11.00 m and clear width 7.5 m.
- Ramp watertight cover, 46 m length and driveway
width 4.2 m.
- Fixed internal ramps with slope 7° and width of
abt. 4.20 m.
- One el. driven bow thruster of abt. 1,000 kW.
- One el. driven stern thruster of abt. 800 kW.
- Six double drum el. driven mooring winches, pull 25.0 t.
- Hold ventilation with electro driven fans.
- Two el. driven ballast pumps, cap. 350 m³/h at 1.5 bar
each.

Steam plant
- One Oil fired boiler for thermal oil capacity of 800 kW.
- One Exhaust gas boiler.

Auxiliary engines plant
- Three diesel generator sets of abt. 600 kVA.
- One emergency diesel generator of 210 kVA.
FERRIES & RO-RO, YACHTS, HIGH SPEED BOATS

Wagon Carrier

52 wagons

Builder / Yard No.: Shipyard ULJANIK / 459-462
Designed: Shipyard Uljanik
Owner / Flag: JSC Maritime Investment & Development / RF
Project No.: 10802E
Delivered: 2005, 2006

Classification: Russian Maritime Register of Shipping

Length over all 154.50 m
Length btw perp. 147.00 m
Breadth, moulded 17.50 m
Breadth max. (with fenders) 18.30 m
Depth to freeboard deck 7.50 m
Depth to accommodation deck 13.35 m
Draught scantling 4.70 m
Draught scantling draught 6.000 t
Main engines: ULJANIKN-VRD-BAW ; 552MC
MCR: 2 x 2,000 kW at 250 RPM
Trial speed at 80% MCR, on draught of 4.5 m 14.0 knots

Provisions

Number of wagons (12,020 x 3,060) 52

Heavy Fuel Oil 165 m³
Gas oil 25 m³
Lubricating oil 50 m³
Fresh water 110 m³
Potable water 5 m³
Ballast and heeling water 1,800 m³
Consumption HFO: 17,4/24 hours
Cruising Range: 3,000 n.m.
Crew Complement: 20 persons
Passengers 12 persons

The vessel is suitable to carry crude oil, oil products and propane gas in wagon-cisterns on two fixed decks at Caspian Sea services. Other liquid, solid cargoes and gases in tank cisterns, dangerous goods in packaged form may be carried providing that their flammability, toxicity, reactivity is such that it correspond to this of above design cargoes.

Trucks, cars, trailers and other wheeled cargoes may be carried providing that their dimensions, admissible load, tire print correspond to vessel design (obtained for the design cargoes). The vessel is divided on following main compartments: fore peak, cargo area and double bottom/side tanks, engine room and after peak.

Ships equipment

- One cargo/wagon elevator, electrohydraulic driven type, capacity SWL 170 t. Clear opening is suitable for wagon platforms up to 14,540 m in length.
- Two/four pairs of rails, non flush design, made of 60 mm square bars welded at decks are arranged at weather deck and two pairs of rails are arranged at lower hold/tank top deck. Gauge between the rails is 1,524 mm.
- Two sets of switch gears, arranged at aft part of weather deck, to route the wagons from centre to side pair of rails, port and starboard.
- Two wagon handling units (pushers) at lower deck for wagon stowage. Load capacity is 680 t.
- One stern port/movable bulwark.
- Two wagon handling units (pushers) at lower deck for wagon stowage. Load capacity is 680 t.
- One oil fired boiler steam capacity 1,000 kg/h at 6 bar.

Steam plant

- One oil fired boiler steam capacity 1,000 kg/h at 6 bar.

Auxiliary engines plant

- Two shaft generators marine type of abt. 875 kVA.
- Two diesel generator sets of abt. 460 kVA Fuel Gas Oil.
- One emergency diesel generator of 100 kVA.

CROATIAN SHIPBUILDING
Expedition Cruise Ship

204 passengers

Classification: LR +100A1 Passenger ship +LMC, UMS, NAV 1, Finnish — Swedish Ice class 1A

Auxiliaries
- Three (3) diesel alternators of abt. 1,000 kW each at 1,000 — 1,500 rpm
- One (1) emergency diesel generator of abt. 270 kW at 1,500 rpm
- Two (2) composite exhaust gases / oil fired marine boilers
- One (1) incinerator for garbage, waste and oil sludge
- High pressure water fire extinguishing system, CO₂, for engine rooms.

Life saving equipment
- Two (2) partially enclosed life / tender boats, also rescue boats
- Two (2) partially enclosed life boats
- Four (4) liferafts
- Galley, provision stores (abt. 120 m²) and service (food) lift
- Two (2) passengers’ and (1) crew’s lift
- One (1) deck crane of 1.8 t at 14 m outreach
- All public, living and service spaces air conditioned, ventilated or / and heated
- Three (3) fresh water evaporators, totally 90 m³ / day,
- Gravity type grey water system
- Vacuum type black water system
- Grey water collecting tank and sewage treatment unit, biological type

Length over all abt. 120.00 m
Length b. p. 105.00 m
Breadth moulded 17.80 m
Depth moulded to main deck 6.80 m
Depth, moulded to first exposed deck 12.10 m
Design draught (above base line) 4.50 m
Scantling (subdivision) draught 4.60 m
Deadweight at design draught abt. 1,050 m t.
Main engines, medium speed 2 x 2,760 kW
Trial speed at 3800 kW and 4.5 m draft 16.00 kn
Cruising range abt. 8,000 Nm
Passengers 196
Crew 114

Capacities
Fuel
HFO & MDO storage tanks (4) abt. 477 m³
HFO settling tanks (2) abt. 34 m³
HFO service tank (1) abt. 9 m³
MDO service tanks (2) abt. 6 m³
Fresh water
Storage tanks abt. 267 m³
Grey water
Collecting tanks (2) abt. 178 m³
Water ballast
Fore peak abt. 215 m³
Double bottom tanks abt. 650 m³

The vessel is designed for worldwide expedition cruising including ice covered areas that can be sustained by Ice Class 1A.
Twin CPP and high performance flap rudders combined with one 800 kW bow thruster claims for excellent maneuverability in confined ports, archipelagos or river estuaries.
One pair of folding fin stabilizers provided to increase comfort of passengers in heavy seas.
Motor Yacht
Refurbishment Project

Yard: Shipyard VIKTOR LENAC
Name: m/y CHRISTINA O.
Owner: Christina Yachting Inc / Greece
Designed by: Costas Carabelas Design Office / Greece
Redelivered: July 2001

Classification: ABS Europe

Length: 99.00 m
Breadth: 11.12 m
Height to promenade deck: 7.47 m
Draft: 4.20 m
Speed: 18.6 knots

New built in materials
Steel: 600 tons
Aluminium: 12 tons
Pipings: 140 tons
Electrical cables: 85 kms

Machinery/propulsion system
- New Main Engines, 2 pcs...MAN type (2,040 kW each)
- New Auxiliary Engines, 3pcs...MAN type (515 kW each)
- New propellers, 2 pcs
- New additional struts for shaling, 2pcs
- Repair of the entire existing shafting arrangement, 2 pcs
- Entire equipment and devices of engine room (new)
- Newly made additional stylish funel behind the existing one

Accomodations (newly formed)
- Spacious luxury passengers cabins (18)
- Owner’s suite (1)
- Fitness center
- Kindergarten

Formerly the private yacht “Christina” of the legendary Greek shipowner Aristotel Onassis has become after the completed works of her extensive refurbishment the most prestigious passenger yacht for commercial cruising of the jet - set clientele.

The approach to this unique project was to keep as much as possible the image of the former ship with its original external splendor and internal luxury.

However, the original but aged ship’s hull built yet in 1943 as well as the reconstruction of the vessel for the new purpose set many complex demands which were imposed upon Shipyard “Viktor Lenac”.

Now in property of John Paul Papanicola Group and with her length of 99 meters, “Christina O.” has become the most luxurious super游艇 which will sail at the world seas, and which appearance, equipment and seaworthiness are credited to the successfully performed works by the skilled and highly qualified workers of Shipyard “Viktor Lenac”, capable of carrying out of such special projects.
### RO-RO Passenger Ferry

**100 cars / 600 passengers**

**Builder / Yard No.:** Shipyard KRAJEVICA/ 535

**Name:** SV. KRŠEVAN

**Owners:** Jadrolinija, Rijeka, Croatia

**Flag:** Croatia

**Designed by:** R-Project, Rijeka, Croatia

**Delivered:** 2005

**Classification:** Croatian Register of Shipping

- 4-5041 M1 AUTI IWS — Ro-Ro Passenger ship for navigation in coastal area 6, able for transport of dangerous packed cargo of following classes:
  1. explosives, 2. gases, 3. flammable liquids.

---

#### Main characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loa</td>
<td>87.6 m</td>
</tr>
<tr>
<td>Lbp</td>
<td>80.0 m</td>
</tr>
<tr>
<td>B(moulded)</td>
<td>17.5 m</td>
</tr>
<tr>
<td>B(moulded to main deck)</td>
<td>7.0 m</td>
</tr>
<tr>
<td>Draught max</td>
<td>2.4 m</td>
</tr>
<tr>
<td>Deadweight at 2.4 m</td>
<td>800 m.t.</td>
</tr>
<tr>
<td>Gross tonnage</td>
<td>2,438</td>
</tr>
<tr>
<td>Speed in trial conditions at draft of 2.2 m</td>
<td>11.5 knots</td>
</tr>
<tr>
<td>Machinery main components</td>
<td></td>
</tr>
<tr>
<td>Main engine</td>
<td>4 x 400 kW</td>
</tr>
<tr>
<td>Propulsion unit</td>
<td>4 x 400 kW</td>
</tr>
<tr>
<td>Electric power plant</td>
<td>2 x 240 kVA + 1 x 90 kVA</td>
</tr>
</tbody>
</table>

#### Cargo equipment

- Cargo handling system

The ship is designed as double ended Ro - Ro and passenger ferry propelled by two propelling units on each bow/stern side of the ship. The ship will be intended for transport of passengers and vehicles as well as packed dangerous cargoes loaded on the vehicles, navigating in coastal area 6, with duration of voyage up to 90 minutes.

- **Capacities**
  - **Passengers:** 600 persons, 300 of which in closed areas (air-conditioned salon) and 300 in open area (Sun deck).
  - **Vehicles:** 100 standard cars or 12 trailers of 40 tones

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The ship has open garage deck (main deck) for trailers and car transportation and for cars on hydraulically operated movable platforms. The Concept is based upon the idea of modern “drive through” ferry for loading and unloading of vehicles and passengers in the shortest period. The ship is equipped with hydraulically operated bow and stern ramps.

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**Builder / Yard No.:** Shipyard KRALJEVICA/ 535

**Name:** SV. KRŠEVAN

**Owners:** Jadrolinija, Rijeka, Croatia

**Flag:** Croatia

**Designed by:** R-Project, Rijeka, Croatia

**Delivered:** 2005

**Classification:** Croatian Register of Shipping

- 4-5041 M1 AUTI IWS — Ro-Ro Passenger ship for navigation in coastal area 6, able for transport of dangerous packed cargo of following classes:
  1. explosives, 2. gases, 3. flammable liquids.
FERRIES & RO-RO, YACHTS, HIGH SPEED BOATS

Car & Passenger Ferry

100 cars / 600 passengers

Builder / Yard No.: BRODOSPLIT - Naval and Special Vessel Shipyard Ltd. / 599, 503
Name: m/s SUPETAR, m/s CRES
Owner: Jadrolinija, Rijeka, Croatia
Delivered: 2004, 2005

Classification: Croatian Register of Shipping (CRS) as:
* 50 A1 M1 AUT1 IWS Ro-Ro Passenger Ferry for navigational area 6. voyage lasting up to 120 min., capable to carry packed dangerous cargo of the following classes: 1 (explosives), 2 (gases), 3 (inflammable liquids).

Main Characteristics
Length, over all abt. 87.80 m
Length, (Lpp) 80.00 m
Breadth 17.50 m
Height, up to main deck 3.70 m
Draught, max. 2.40 m

Carying capacity
Passengers 600, from which 240 in close salon
Crew 8 members
Cars 100 or 12 trailers of 18 m, 40 t each

Construction
Vessel’s primary mission is transportation of passengers and vehicles at short routes and designed as Ro-Ro and passenger ship for equal navigate in both directions (“double ended”).
Vessel is with open space (garage) for vehicles (cars) on main deck and with two ramps (stern and bow 1 each).
Vessel has excellent manoeuvrability due to propulsion system with 4 diesel main engines (4 x 400 kW) which are drive direct 4 feat propulsors with crank wings, two sets on stern and two sets on bow.

Machinery and electrics
Propulsion engines, propulsors and diesel generators are accommodation in two engine rooms, one on aft and one on bow.
Ship’s speed in trial conditions (easily sea and wind below 2 Bf, clean hull) is 11.5 knots on 2.2 m draught.

Builder / Yard No.: BRODOSPLIT - Naval and Special Vessel Shipyard Ltd. / 599, 503
Name: m/s SUPETAR, m/s CRES
Owner: Jadrolinija, Rijeka, Croatia
Delivered: 2004, 2005

Classification: Croatian Register of Shipping (CRS) as:
* 50 A1 M1 AUT1 IWS Ro-Ro Passenger Ferry for navigational area 6. voyage lasting up to 120 min., capable to carry packed dangerous cargo of the following classes: 1 (explosives), 2 (gases), 3 (inflammable liquids).

Main Characteristics
Length, over all abt. 87.80 m
Length, (Lpp) 80.00 m
Breadth 17.50 m
Height, up to main deck 3.70 m
Draught, max. 2.40 m

Carying capacity
Passengers 600, from which 240 in close salon
Crew 8 members
Cars 100 or 12 trailers of 18 m, 40 t each

Construction
Vessel’s primary mission is transportation of passengers and vehicles at short routes and designed as Ro-Ro and passenger ship for equal navigate in both directions (“double ended”).
Vessel is with open space (garage) for vehicles (cars) on main deck and with two ramps (stern and bow 1 each).
Vessel has excellent manoeuvrability due to propulsion system with 4 diesel main engines (4 x 400 kW) which are drive direct 4 feat propulsors with crank wings, two sets on stern and two sets on bow.
**RO-RO Passenger Ferry**

**130 cars / 1200 passengers**

**Builder / Yard No.:** Shipyard KRALJEVICA / 536

**Name:** MARIJAN

**Owners:** Jadrolinija, Rijeka, Croatia

**Flag:** Croatia

**Designed by:** R-Project, Rijeka, Croatia

**Delivered:** 2006

**Classification:** Croatian Register of Shipping

W50A1 M1 AUT1 IWS / FL0028 Ro-Ro Passenger ship for navigation in coastal area 6, able for transport of dangerous packed cargo of following classes: 1 (explosives), 2 (gases), 3 (flammable liquids).

**Main characteristics**

- **Loa:** 87.6 m
- **Lbp:** 80.0 m
- **B(moulded):** 17.5 m
- **B(moulded to main deck):** 3.7 m
- **Draught max:** 2.4 m
- **Deadweight at 2.4 m:** 700 m.t.
- **Gross tonnage:** 3,224
- **Machinery main components:**
  - 4 x 400 kW
- **Electric power plant:**
  - 2 x 240 kVA + 1 x 90 kVA

**Capacity**

- **Passengers:** 1,200 persons, 800 of which in closed areas (air-conditioned salon) and 400 in open area (Sun deck).
- **Vehicles:** 130 standard cars or 12 trailers of 40 tones

**Cargo equipment**

- **Cargo handling system**

The ship is designed as double ended Ro-Ro and passenger ferry propelled by two propelling units one on each bow/stern side of the ship. The ship will be intended for transport of passengers and vehicles as well as packed dangerous cargoes loaded on the vehicles, navigating in coastal area 6, with duration of voyage up to 90 minutes.

The ship has open garage deck (main deck) for trailers and car transportation and for cars on hydraulically operated movable platforms. The Concept is based upon the idea of modern “drive through” ferry for loading and unloading of vehicles and passengers in the shortest period. The ship is equipped with hydraulically operated bow and stern ramps.

**Builder / Yard No.:** Shipyard KRALJEVICA / 536

**Name:** MARIJAN

**Owners:** Jadrolinija, Rijeka, Croatia

**Flag:** Croatia

**Designed by:** R-Project, Rijeka, Croatia

**Delivered:** 2006

**Classification:** Croatian Register of Shipping

W50A1 M1 AUT1 IWS / FL0028 Ro-Ro Passenger ship for navigation in coastal area 6, able for transport of dangerous packed cargo of following classes: 1 (explosives), 2 (gases), 3 (flammable liquids).

**Main characteristics**

- **Loa:** 87.6 m
- **Lbp:** 80.0 m
- **B(moulded):** 17.5 m
- **B(moulded to main deck):** 3.7 m
- **Draught max:** 2.4 m
- **Deadweight at 2.4 m:** 700 m.t.
- **Gross tonnage:** 3,224
- **Machinery main components:**
  - 4 x 400 kW
- **Electric power plant:**
  - 2 x 240 kVA + 1 x 90 kVA

**Capacity**

- **Passengers:** 1,200 persons, 800 of which in closed areas (air-conditioned salon) and 400 in open area (Sun deck).
- **Vehicles:** 130 standard cars or 12 trailers of 40 tones

**Cargo equipment**

- **Cargo handling system**

The ship is designed as double ended Ro-Ro and passenger ferry propelled by two propelling units one on each bow/stern side of the ship. The ship will be intended for transport of passengers and vehicles as well as packed dangerous cargoes loaded on the vehicles, navigating in coastal area 6, with duration of voyage up to 90 minutes.
RO-RO Passenger Ferry

65 cars / 360 passengers

Builder / Yard No.: Shipyard KRALEVIC / / 550, 551, 552
Owners: Wightlink, Portsmouth, UK
Flag: UK
Delivery: 2008

Classification: Lloyds Register – Rules for Classification of Steel Ships, Class -E-100 A1 Passenger/Vehicle Ferry LYMINGTON TO ISLE OF WIGHT SERVICE +E-LMC, EP
United Kingdom Maritime Coastguard Agency (MCA) Regulations for Class IV, for operation in Category D Waters.

Main characteristics

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loa</td>
<td>62.4 m</td>
</tr>
<tr>
<td>Lbp</td>
<td>61.0 m</td>
</tr>
<tr>
<td>B(moulded)</td>
<td>16.0 m</td>
</tr>
<tr>
<td>B(moulded to main deck)</td>
<td>4.5 m</td>
</tr>
<tr>
<td>Draught max.</td>
<td>2.3 m</td>
</tr>
<tr>
<td>Deadweight at 2.4 m</td>
<td>360 m.t.</td>
</tr>
<tr>
<td>Speed in trial conditions at draft of 2.3 m</td>
<td>11.0 knots</td>
</tr>
</tbody>
</table>

Machinery main components

- Main engine: 4 x 550 kW
- Propulsion unit – Voith-Schneider: 2 x 825 kW
- Electric power plant: 4 x 225 kW

Cargo equipment

- Cargo handling system

The ship is designed as double ended Ro - Ru and passenger ferry with one hoistable garage deck, one fixed vehicle deck and Mezzanine Deck with moveable ramps. The ship is propelled with two Voith Schneider cycloidal propellers (VSP), located in two propeller rooms. Two Engine Rooms are located either side of a central auxiliary machinery space. Propellers are driven by four Diesel Engines, by means of belt drives.

Passenger Accommodation is provided on one deck. The Mezzanine Deck is to be served by movable ramps. The hoistable Garage Deck is constructed of one section and can be lowered to give access to cars. Commercial vehicles can be carried on the main Car Deck, when the Garage Deck is in the raised position. The vessel is able to carry Passengers, Caravans, Buses, Private Cars, and commercial vehicles, with fuel in their tanks.

Capacities

- Passengers: 213 seats and Sun Deck 140 seats
- Vehicles: Cars 15 – Garage Deck, Cars 12 – Mezzanine Deck, Cars 38 – Main Deck
- Commercial Vehicles: Main Deck
Passenger Cruise Ship

52 pass

Main Characteristics

Length, over all: abt. 59.80 m
Breadth: 10.68 m
Depth: 4.50 m
Draught: 3.00 m
Gross tonnage: 1,206 GT

Accommodation

Passengers: 52
Crew: 21

Luxury cruise ship is designed to carry 52 passengers for cruise in navigation area 2 and is built according to the Rules of Croatian Register of Shipping (CRS) for passenger ships.

Hull and larger part of superstructure are built from steel (grade A), welded construction. Uppermost superstructure, including wheelhouse and funnel, are built from aluminium alloy, welded construction too.

Two four-stroke diesel engines, electrically started, 2 x 821 kW, driving 2 propellers through reversible reduction gears, enable service speed of 12.5 knots. Propulsion plant is remotely controlled from wheelhouse control console.

Electrical power is provided from 3 diesel generators (2 of them are in action in parallel mode and 1 of them is for spare) 3 x 380 V, 50 Hz, 315 kVA (each) and 1 emergency diesel generator 3 x 380 V, 50 Hz, 170 kVA. Also electrical power is provided from batteries 24 V DC.

Transitional power source (TPS) set-15 kVA with own batteries set is also installed.

GMDSS radio equipment includes all necessary for A3 area. Navigation system consists of: 2 X-band radars, ECDIS, GPS, gyro compass, magnetic compass, FU and NFU steering controls, autopilot, echo sounder, speed log, Voyage Data Recorder (VDR), navtex and SSAS.

Wheelhouse, passenger and crew accommodations are air-conditioned. Highclass passenger accommodations include 24 two-bed cabins (18 of them with balcony) for 48 passengers, as well as 4 one-bed cabins for 4 passengers. Passenger service areas include dining room and lounge with bar, external bar, gym and aft water entry platform.

Crew areas include 1 captain cabin and 1 chief engineer cabin, 2 one-bed cabins, 4 two-bed cabins and 3 three-bed cabins are provided for crew.
Luxury, 38.5 m long, displacement Motor Yacht, intended for chartering (MCA Code).

Designed to provide full comfort for 8 passengers. Each of the four guest staterooms are luxuriously appointed to provide optimum comfort and have complete entertainment systems. The interior is designed for a casual and relaxing atmosphere with large windows on the main deck offering natural light and spectacular views. The main deck dining saloon offers a formal touch with seating for eight.

Sun deck with Jacuzzi and sunbathing areas provide unobstructed sea viewing.

Powered by two MTU 2,000 12V M70 engines of 788 kW each.

Main characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loa</td>
<td>38.50 m</td>
</tr>
<tr>
<td>Lwl</td>
<td>31.98 m</td>
</tr>
<tr>
<td>B</td>
<td>7.73 m</td>
</tr>
<tr>
<td>Draught</td>
<td>2.20 m</td>
</tr>
<tr>
<td>Speed</td>
<td>14 kn</td>
</tr>
<tr>
<td>Fuel Tank</td>
<td>75 t</td>
</tr>
</tbody>
</table>

Builder / Yard No.: Shipyard KRALJEVICA / 528
Designed: Studio STARREL - Trieste / CADCON-Pula, Croatia
Delivered: 2003
Car & Passenger Ferry
51 cars / 210 passengers

The ferries are dedicated to sail on the short route between mainland and Island of Rab. These catamaran-type ferries are suitable for fast loading and unloading of the vehicles and great efficiency of the main deck area. The propulsion units are simple and robust in order to satisfy demand for heavy duty operation with huge number of maneuvers during operation.

m/t SVETI KRISTOFOR is lengthened version of m/t SVETI KRISTOFOR.

Classification: CRS RORO Passenger vessel 50 A1 M1 AUT 3, Coastal area 6, capable for carrying packed dangerous goods of classes: 1 (explosives), 2 (gasses), 3 (flammable liquids)

<table>
<thead>
<tr>
<th>Car &amp; Passenger Ferry</th>
<th>SVETI KRISTOFOR</th>
<th>SVETI MARIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length over all (m)</td>
<td>42.00</td>
<td>49.20</td>
</tr>
<tr>
<td>Length between perpendiculars (m)</td>
<td>35.20</td>
<td>42.40</td>
</tr>
<tr>
<td>Depth to main deck (m)</td>
<td>3.60</td>
<td>3.60</td>
</tr>
<tr>
<td>Breadth molded (m)</td>
<td>15.30</td>
<td>15.30</td>
</tr>
<tr>
<td>Breadth molded (each hull) (m)</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Draft (m)</td>
<td>2.40</td>
<td>2.40</td>
</tr>
<tr>
<td>Gross tonnage</td>
<td>450</td>
<td>499</td>
</tr>
<tr>
<td>Deadweight (t)</td>
<td>180</td>
<td>230</td>
</tr>
<tr>
<td>Capacity:</td>
<td>51 cars, 210 passengers</td>
<td></td>
</tr>
<tr>
<td>Main engines:</td>
<td>Cummins KTA 19-M3</td>
<td>MAN D2842LE412</td>
</tr>
<tr>
<td>Total power (kW)</td>
<td>954</td>
<td>1176</td>
</tr>
<tr>
<td>Speed (kn)</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

Builder / Yard No.: Shipyard VIKTOR LENAC / 129, 131
Name: m/t SVETI KRISTOFOR, m/t SVETI MARIN
Owner: Rapska plovila d.d, Croatia / Croatia
Design: Boat’s Consulting, Croatia
Delivered: 2003, 2005
## Car Ferry Type 36

**Builder / Yard No.:** BRODOSPLIT - Naval and Special Vessel Shipyard Ltd. / 585, 585, Shipyard KRALJEVICA / 502  
**Name:** m/s LASLOVO - NB 585, m/s STON - NB 586, m/s KJEVO - NB 502  
**Owner:** Jadrolinija / Croatia  
**Delivered:** 1997

### Classification:
Croatian Register of Shipping  
**INS** Passenger ship for navigation in coastal area 6, with duration of voyage 1 hour, capable for carrying packed dangerous cargo of classes 1 (explosives), 2 (gases), 3 (flammable liquids).

### Loading/unloading equipment
For vehicle loading/unloading, forward and stern ramp with flaps are provided, both electro-hydraulically operated.

### Machinery and electrics
The diesel electric propulsion plant consists of two main diesel generators, each 410 kVA; two azimuth thrusters driven by A.C. electric motors and one fully rotatable jet type bow thruster, driven by electric motor.
Ship’s electric supply is 3x380V/50Hz. Emergency diesel generator of 80 kVA is fitted.

### Navigation and communication equipment
Navigation equipment is fitted in accordance with restricted navigation area and consists of X-band radar and magnetic compass. Communication equipment includes VHF radiotelephone, command and talk back system and TV monitoring system for stern ramp and engine room.

### Cruising range and autonomy
At the speed of 9.5 knots, about 7 voyages for max. 1 hour duration could be done. Provisions suffic. for 7 days.

### Complement
The ship provides full accommodation for 6 crew members in single berth cabins.

### Construction
Two hulls connected by main deck and two side towers connected overhead by crew deck with free height 4.50 m over main deck and comprising crew cabins, with the wheelhouse on top of it. The hull and superstructure are made of shipbuilding steel grade “A” in welded construction.

| Lenght Over All (include ramps) | 41.20 m |
| Lenght btw perp. | 33.60 m |
| Breath moulded | 16.00 m |
| Breath moulded (each hull) | 5.20 m |
| Draught loaded | 2.15 m |
| Draught, maximum | 2.45 m |
| Gross tonnage | abt. 100 t |
| Main engine (El. Propulsion) | 2 X 250/1,500 RPM |
| Trial speed at 90 % Max. rated power; and 2.15 m draught | 9 knots |
| Capacity: 36 cars or 3 articulated trucks (each 40t) | 150 passengers (74 in lounge, 76 on open deck) |
Passenger Ferry

20.76 m

Main Characteristics

Length, over all  abt. 20.76 m
Breadth  6.40 m
Height, up to main deck  2.80 m
Draught  1.60 m
Gross tonnage  abt. 130 GT

Accommodation

Passengers (summer)  140 (119 seated)
Passengers (winter)  71
Crew  3

Vessel’s primary mission is ferrying of passengers on short routes, i.e. navigation area 6 according to CRS and it is built according to the Rules of Croatian Register of Shipping (CRS) and Lloyd’s Register (LR) Rules for special service craft.

Hull and superstructure are built from steel (grade A), of welded construction.

Two four-stroke diesel engines, electrically started, 2 x 220 kW, driving 2 propellers through reversible reduction gears, enable service speed of 10 knots. Propulsion plant is remotely controlled from wheelhouse control console.

Wheelhouse (with all round visibility), passenger and crew accommodation spaces are air-conditioned.

Electrical power is provided from diesel generator 3 x 380 V, 50 Hz, 32 kW and from batteries 24 V DC. Radio equipment includes VHF/DSC and VHF portable. Navigation system consists of: radar, GPS, magnetic compass and echo sounder.

Passenger accommodation includes 43-seat lounge, 17-seat VIPs lounge and 59-seat open deck accommodation.

One three-berth cabin is provided for crew accommodation.
Search and Rescue Boat

17 m

Primary mission is search, rescue of human lives and sea surveillance. Additionally equipped with portable bilge fire fighting pump.

The craft is designed for navigation area R2 according to DNV (including EEZ protection) in heavy weather conditions, during whole year.

Length over all: 17.10 m
Breadth max: 6.22 m
Depth to main deck: 2.70/2.20 m
Draught baseline: 0.89 m
Draught at propellers: 1.16 m
Service speed: 20 knots
Max. speed: 24 knots

Construction
The hull is made of mild steel in welded construction. High tensile steel is used in those parts of the hull, subjected to higher stress. Superstructure is made of seawater resistant aluminium alloy in welded construction. It is connected to steel hull by means of aluminium - steel transition joint bar.

Tank capacities
Fuel: 1.85 t
Fresh water: 0.70 t
Fire fighting: 0.25 t

Machinery and electrics
Two four-stroke, water cooled, turbocharged diesel engines 610 kW/2,000 RPM each, with reduction gears.
Basic craft power supply 220 V, 50 Hz and 24 V DC.
Electric power is derived from 10 kW diesel generator 220 V, 50 Hz and batteries 24 V.

Electronic and navigation equipment
The external communication system consists of VHF radio-telephones and alert receiver which provide ship - to - ship and ship - to - shore communications. In addition, electric hailer with loud speaker on the mast and microphone with amplifier in wheel house. The navigation system includes: radar, radio direction finder, GPS plotter, EPIRB buoy, magnetic compass (2 sets), echosounder and electro-magnetic log.

Other systems and equipment
The craft is equipped with following systems: ventilation, CO₂ fire - fighting, foam fire - fighting monitor, engine room diesel fire pump, portable petrol fire pump and reinforced life - saving equipment, including 2 life - rafts, hydro - thermo protective suits, basic resuscitation kit etc.

Cruising range
Fuel oil tanks capacity ensures 200 Nm range at 20 knots speed.

Complement
The craft is outfitted to accommodate 4 crew members.

Rescue capacity
The craft is outfitted to take 10 survivors, including max. 3 in lying position.
Search and Rescue Craft

14.45 m

Fast boat’s primary task is surveillance at sea and search & rescue.
Fast boat is built according to rules of Croatian Register of Shipping (CRS) for boats for commercial purposes and according to Germanischer Lloyd (GL) rules. It is made of sea resistant aluminium alloy (A6Mg4.5Mn), longitudinally framed, welded construction.

Damaged stability requirements are satisfied.

Two four-stroke diesel engines, turbocharged, electrically started, mechanically regulated RPM, maximal engine brake power 2 x 305 kW, driving 5-bladed propellers through reversible V-type gearboxes, enable service speed of 26 knots.

Propulsion plant is remotely controlled from wheelhouse control console.

Wheelhouse (with all round visibility) and accommodation spaces are air-conditioned.

Electrical power is provided from batteries (24V DC) and from diesel generator (220V, 50Hz, 8kW). Boat is equipped with radio equipment (1 VHF/DSC, 1 VHF, 2 VHF portable, 1 AIS transponder and 1 NAVTEX). Navigation system consists of: 1 radar, 1 GPS, 1 magnetic compass, 1 echo sounder/speed log.

Accommodation is provided for 2 crewmembers and 12 passengers/survivors. In addition, there are 2 single-berth cabins and 1 auxiliary berth.

Fuel tanks capacity enables range of 400 nautical miles (NM), at 23 knots speed. Stores enable 7 days autonomy.

This boat can also be used as oil spill control boat or fire fighting boat, by adding specific equipment at working deck at stern.

Main Characteristics

<table>
<thead>
<tr>
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<th>Value</th>
</tr>
</thead>
<tbody>
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<td>Length, over all</td>
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</tr>
<tr>
<td>Length, hull without platforms</td>
<td>13.10 m</td>
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<tr>
<td>Breadth, max. without fenders</td>
<td>4.64 m</td>
</tr>
<tr>
<td>Draught, max.</td>
<td>1.15 m</td>
</tr>
</tbody>
</table>

Builder / Yard No.:
BRODOSPLIT - Naval and Special Vessel Shipyards Ltd. / 501, 502, 504
YARD 501 - PLANAC
YARD 502 - UMAG
YARD 504 - MARJAN

Owner:
Republic of Croatia - Ministry of the Sea, Tourism, Transport and Development

Delivered:
2004, 2005

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# Fast Aluminium Workboat

**Length, overall:** 14.45 m  
**Length, hull without platforms:** 13.10 m  
**Breadth, max. without fenders:** 4.64 m  
**Draught:** 1.15 m

Fast workboat’s primary task is maintenance of maritime signalling devices and objects, such as buoys and lighthouses, transportation of lighthouse’s crew and cargo supply. Open working deck area at stern is equipped with electro-hydraulic crane of knuckle type. Maximal crane load is 1.5 t. Maximal stern working deck area load is 3 t. Wheelhouse and accommodation spaces are air-conditioned.

**Classification**  
Fast workboat is built according to rules of Croatian Register of Shipping for boats for commercial purposes. Furthermore, damaged stability requirements are satisfied.

**Construction**  
Boat is made of sea resistant aluminium alloy (AlMg4.5Mn), longitudinally framed, welded construction.

**Machinery and electrics**  
Two four-strokes diesel engines, turbocharged, electrically started, mechanically regulated revolution, maximal engine brake power 2 x 305 kW, enable service speed of 23 knots. V-type gearboxes are reversible. Propulsion plant is remotely controlled from wheelhouse control console. Electrical power is provided from batteries (24 V DC) and from diesel generator (220 V, 50 Hz, 9 kW).

**Navigation and communication equipment**  
Boat is equipped with VHF radio telephone for external communication. Navigation system consists of radar, GPS, magnetic compass, echo sounder and speed log.

**Cruising range and autonomy**  
Fuel tanks capacity enables action radius of 400 nautic miles, at 23 knots speed. Stores enable 7 days autonomy.

**Complement**  
Accommodation is provided for 3 crew members and 9 passengers. In addition, there are 4 cabin berths and 4 auxiliary berths.

**Design variants**  
Without changing basic parameters of boat’s design, and only changing above water parts, various variants are obtained, such as:  
- fast passenger boat  
- ambulance boat  
- oil spill control boat  
- luxury boat  
- patrol boat, etc.

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**Builder / Yard No.:** BRODOSPLIT - Naval & Special Vessel Shipyard Ltd / 584, 593, 594, 595, 596, 597, 598  
**Name:** PLOVPUT 1 - 7  
**Owner / Flag:** Plovput d.o.o. Split / Croatia  
**Designed by:** BRODOSPLIT Naval & Special Vessel Shipyard  
High Speed Patrol Boat
Aluminium Boat 7.5 m

Aluminium Walk-around pilothouse boat of 7 m length is designed as inland waters Police patrolling boat, but can easily be configured as a fire fighting / rescue boat / Coast Guard or Naval patrol unit.
The boat has been constructed in accordance with the rules of “Croatian Rules of Shipbuilding”
Powered by two Mercury outboard engines (2 x 75-125 HP) is able to develop a top speed of 45 knots.

Main characteristics
Loa 7.080 m
Lwl 5.930 m
B 2.615 m
Draught 0.280 m
Speed max 45 knots
Displacement 1,973 t

General
The aluminium boat is a Walk-around pilothouse boat, it is easily configured for law enforcement, fire / rescue, military or workboat applications

Dimensions
Length overall: 7.080 m
Breadth, max: 2.615 m
Lightship weight: 1,350 kg

Tank Capacity
AltBK 23-1 to be equipped with two fuel tanks for propulsion engines and one fuel tank for heating. Max. tanks capacity are:
Fuel tank 1 (propulsion engine) 150 l
Fuel tank 1 (propulsion engine) 150 l
Fuel tank (heating) 15 l

Propulsion
The AltBK 23-1 is designed with two outboard engines Mercury 115 HP. Maximum speed on the sea trials: 45 knots.
Other engines by the special request possible.

Materials
The construction of AltBK 23-1 consists two volume sections: a hull and a cabin. The constructions of the hull and the cabin to be maid of aluminum alloy. The hull to be built on the transverse system of building, and the cabin on the combination system of building.

Lights
The boat is equipped with the following fixed electric lights:
• One red/green lamp 112o located on the side mast girder.
• One towing lamp 225 o (white)
• One anchor lamp 360 o (white)
• One stern lamp 135 o (white)
• One searchlight on the cabin top
• One cabin light
• One siren

The switches to be placed on the control console in the cabin.

Designed by: Shipyard KRALJEVICA / Brodarski institut - Zagreb
Project: 75HSP

FERRIES & RO-RO, YACHTS, HIGH SPEED BOATS

CROATIAN SHIPBUILDING