NAVY

PATROL VESSEL 43

BRODOSPLIT

Member of DIV GROUP

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COASTAL PATROL VESSEL

The 43.16 m long vessel is fitted with the basic weapon of all coastal guards today, 30 mm automatic gun and two manually operated 12.7 mm machine guns. The vessel can reach the speed of 28 knots at 90% MCR-a and is very capable of pursuit. It has a large navigational range and can stay at sea for ten days with 16 crew members. The vessel is certified in accordance with Croatian Register of Shipping Rules (CRS) member of IACS.

It is a program of five vessels for the needs of Croatian Coast Guard. The basic purpose of the vessel is surveillance and protection of Croatian interests at sea. They will be used as support to island population and in search and rescue sea operations.

Length | overall
43.16 m

Length | on water line
39.11 m

Breadth | max
8.00 m

Breadth | hull
7.50 m

Speed | 90% MCR
28 knots

Draft
2.87 m

Cruising range
The cruising range at speed of 15 knots is **1000 NM**

Complement
16 crew members
Number of crew members may be considered to Customers' preference until 20 crew members

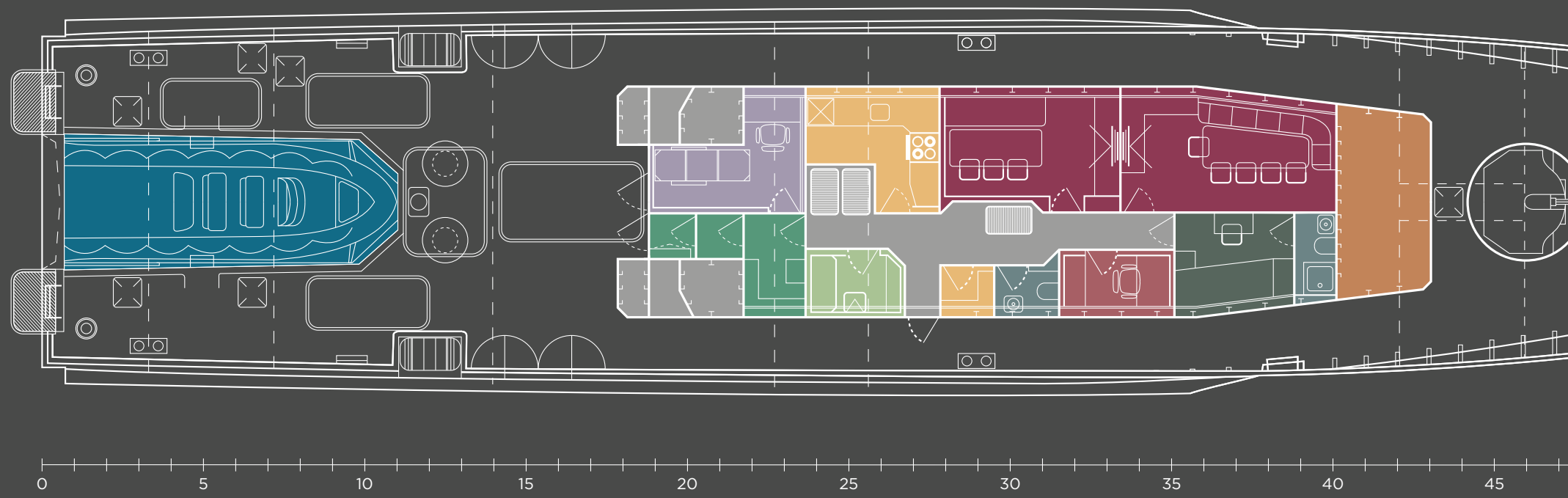
Rated output
2 x **2525 kW**

Logistic support during service life
- Technical monitoring (Safety and Maintenance Management System)
- Maintenance time schedule normative with maintenance in domestic shipyards
- Instruction manuals with maintaining procedures
- Spare parts delivery for 20 years

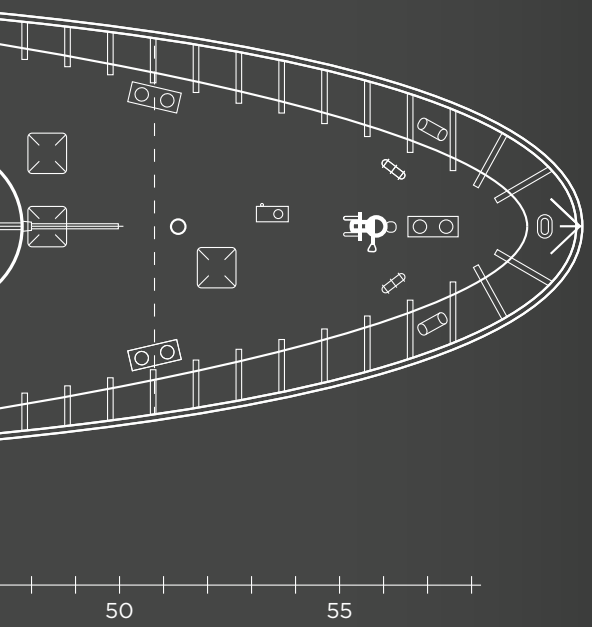
Education
- Crew teaching
- Crew training
- Technical experts teaching and training

General Arrangement

MAIN DECK



- **FAST INTERVENTION BOAT** RHIB
- **INFIRMARY**
- **DECONTAMINATION STATION**
- **GALLEY AND FOOD STORAGE**
- **RADIO CABIN**
- **OFFICER AND NCO COMMON SALOONS**
- **RECEPTION CABIN**
- **GUEST CABIN AND TOILETS**
- **HVAC UNIT SPACE**



MAIN NONCOMBAT MISSION

Patrol
with the purpose of surveillance and protection of interests in territorial and open sea (continental shelf).

Prevention
- terrorism and international organized crime especially smuggling, maritime border violation and illegal migration
- illegal exploitation of marine natural resources and marine cultural
- heritage stealing
- marine environment pollution and other kinds of damage
- pirate activities on the sea

Search and rescue
on the sea and other forms of support

Evacuation and rescue
in the state of natural disasters

MAIN COMBAT MISSION

Artillery protection
of territorial and coastal sea from lightly armed enemy vessels

Air defense
with light portable air defense rockets

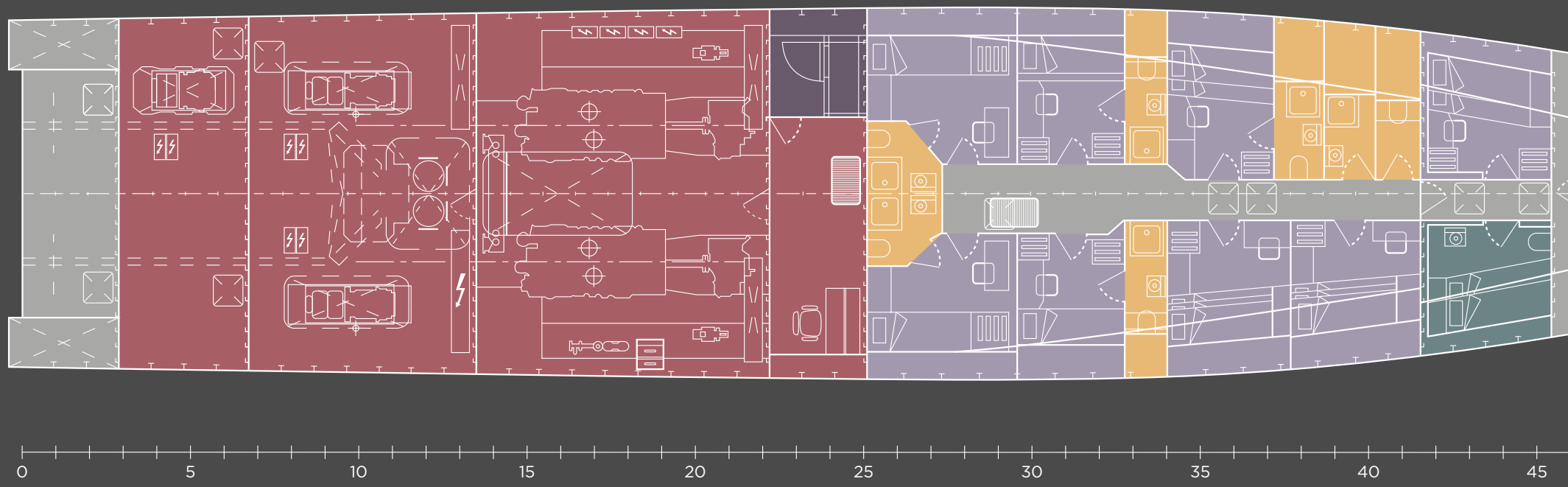
Combat
(using arms) and strategic support for assault and other navy activities

Transportation
of smaller special forces group (up to 10 soldiers)

Interception
of non-armed and lightly armed intruders at sea

General Arrangement

LOWER DECK

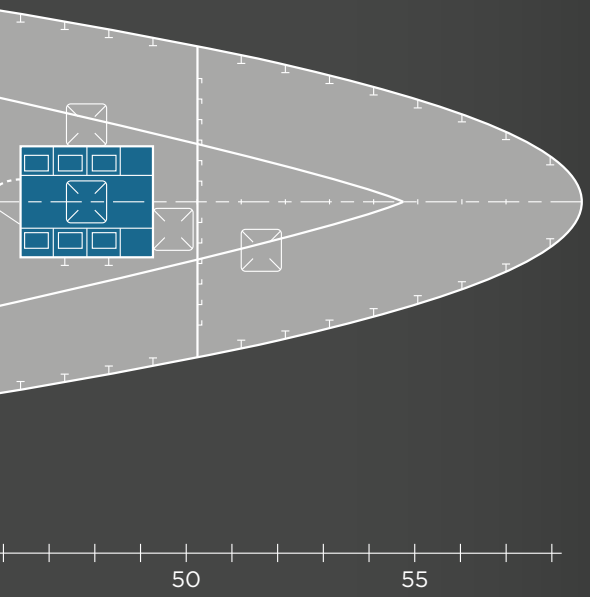


CABINS

GUESTS CABIN

AMMUNITION CHAMBER

AUXILLIARY ENGINE ROOMS, ENGINE ROOM, ENGINE CONTROL ROOM



DESIGN MAIN CHARACTERISTICS

CPV is based on the technologies, methods and experiences of the proven designs used by Croatian and former Yugoslavia Navy for past decades.
Smaller patrol ships are known to be more efficient than the large ones. All design phases are made in Croatian companies (tactical study, feasibility study, initial design, model tests, basic design and workshop design). Adaptable design is well suited to the export market and can be change according to individual customer needs, ensuring they can meet the operational requirements of navies around the world. Estimated world need today for this type of vessel is 2000 units.

Possibility to upgrade
Incorporating a certain level of design reserve, which with a combat system with open architecture, both provide possibilities for and simplified further upgrades during the life time of the vessel

Fulfills given tactical-technical **requirements** and requirements for long patrols

Good behavior of the ship **on waves** ensured even at low patrol speed with stabilization system with fins

Cost-effective patrol vessel
optimally suited for its main tasks

Fulfills international, NATO and CRS **standards**

Full NCB (Nuclear Chemical Biological) crew **protection** ensured

Construction reliability and survivability
- ship can survive flooding of any 2 neighboring waterproof compartments including engine room (ship is divided in 9 waterproof compartments)

High standard for living spaces

Minimized ship resistance and fuel consumption is provided by:

- optimization of hull lines
- optimization of ship structure
- use of lightweight materials for the ship's structure:
  Hull | AH36 - High tensile steel
  Superstructure | aluminum alloy AlMg4.5Mn
- weight optimization of the equipment

Weapon system

One **remotely operated stabilized 30 mm naval gun system**, installed on the main deck forward at the centerline, ensuring a wide field of gun action.

Such configurations incorporate advanced features as remote operation, built-in electro-optic sensor system for autonomous operation, day and night operation, stabilized turret, automatic target tracking (detect, track and fire on the move) and ballistic computation. Stabilized turret enables the line-of-sight of the gun to be aimed at the target at all times. Due to the stabilization feature, the system can perform precise firings against stationary or moving targets while the platform is on-the-move.

Two **360° pedestals for 12.7 mm machinegun** (of M2HB type, e.g.), situated starboard and portside on the superstructure, ensuring a wide field of gun action with same level of protection assured by open bridge wing structure.

EOS - Electric-optical Surveillance (EOS) system for observation, search and recognition of targets at sea and in air, and weapons control. It contains next sensors: Thermal Camera (3-5 m cooled thermal imager, resolution: 640x480 pixels), Day Camera (minimum 20x optical zoom, resolution: 640x480 pixels) and Laser Range Finder (range: 100-20000m, accuracy ± 5 metres, divergence: < 1 mrad).

Weapon system options

- Man-Portable Air Defense missile system (SAM) with four (4) missiles that are located in the boxes.
- Lightweight remote-controlled missile launcher with a short-range ship-to-air or ship-to-ship misseles

Other configurations (20 mm, 27 mm or 40 mm) and producers may be considered to Customers' preference.

Optional oil spill recovery equipment
Free floating skimmer, oil spill temporary tank, deck crane, oil containment booms, air compressor and dispersant systems

360°

Visibility
Wheelhouse windows provide a good visibility on cruising, navigation and berthing.
There is a 360º unobstructed visibility.

MEASURES FOR TECHNICAL SAFETY AND COMBAT ENDURANCE

NCB protection of the crew using ship decontamination station and so called citadel protection systems (spaces in the superstructure and hull from FR 23 to FR 50 can be hermetically closed and fitted with filtrated NCB ventilation system). In order to protect outer superstructure and hull plates from contamination, ship is fitted with sprinkling system. When NCB protection is activated all inlets and outlets are closed automatically using gas proof dampers.

Crew **protection from noise** (floating floors, acoustically isolated rooms)

Vessel have all of the **life-saving equipment** required by international conventions about saving human life at sea for all passengers and crew

SPECIAL EQUIPMENT

Ship waves motion **stabilization system** with active fins stabilization system

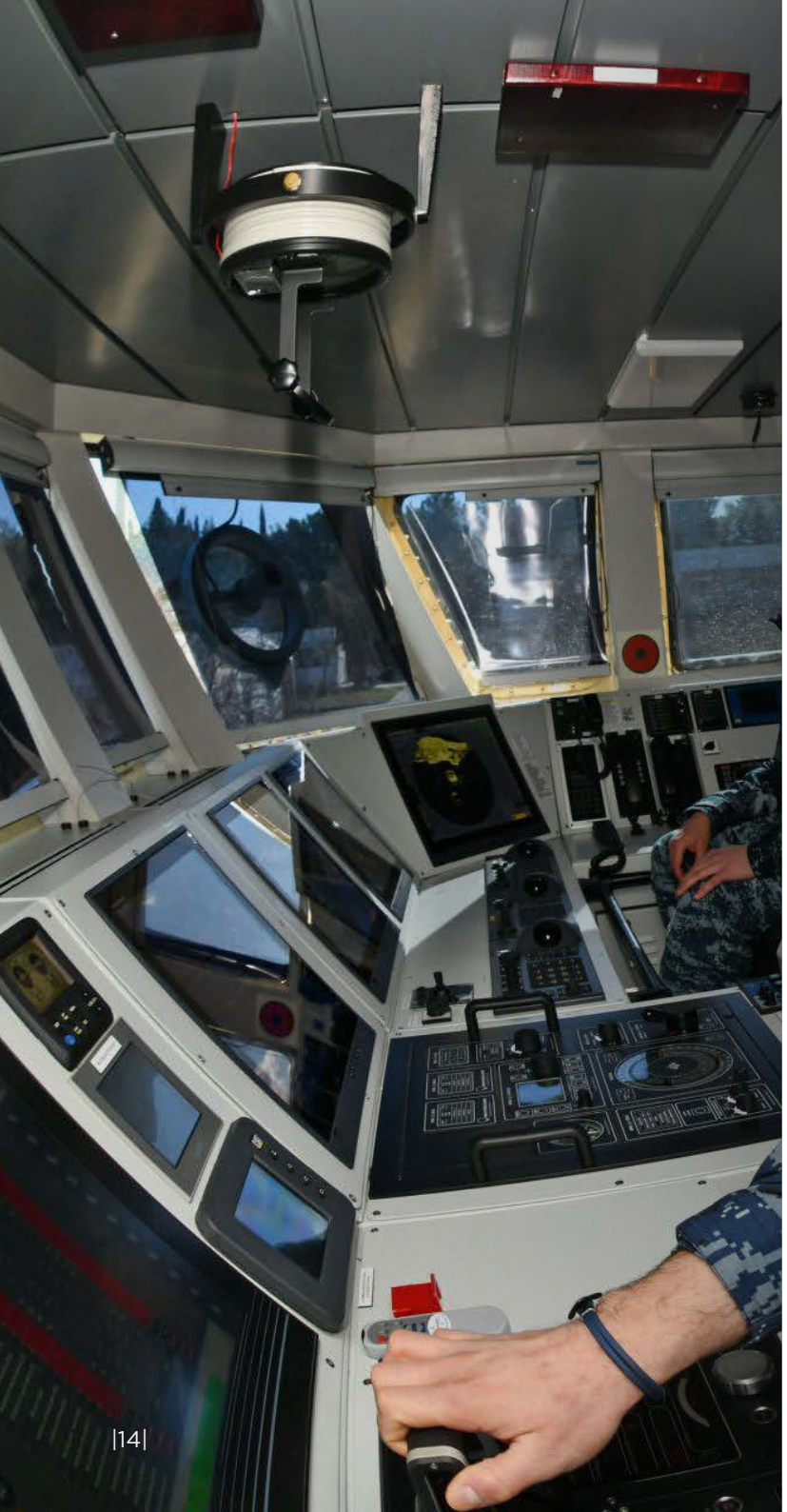
Fast intervention RHIB boat is equipped with:

- inboard diesel engine with waterjet propulsion which enables speed up to 40 kn with 6 crew onboard and range of 60 NM.
- LOA: 7,7 m
- Aluminium hull
- Jockey seats for 6 crew member
- Light machine gun mounting possibility
- Navigational lights and equipment according COLREG 72

Possibility of **fast launch/recover** up to sea state 3 and ship speed min 5 knots

Stern platform with movable ladder for divers or other people in the sea

Firefighting system with a 50 m range monitor



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NAVIGATION SYSTEM

Navigation radar
X band navigation radar - with 96 NM range
S band navigation radar - with 96 NM range

Electric-optical system for daily and night observation with observation recorder

Compass
Main magnetic compass
Gyro-compass

Electric map display

AIS - automatic identification system

Echo sounder
ultrawave sounder, speed and temperature gauge

SHIP SYSTEMS AND PROPULSION - CONTROL AND MONITORING

Monitoring from control cabin, wheelhouse and open bridge using purpose designed control panels (fuel oil system, fresh and grey water, exhaust, bilge, ballast, sprinkling, fire protection, ammunition chamber protection, heating, ventilation, air condition, filter ventilation, water penetration)

Automatic sensor system
133 sensors and alarms installed

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