NAVY SHIPS PORTFOLIO
CREATING SOLUTIONS, CREATING FUTURE
Delta Marine founded in 1996 by a group of naval architects, is a ship design and consultancy firm established to meet the demands of engineering solutions for maritime sector and shipbuilding activities. The company provides design, engineering and consultancy services for building of merchant/naval, yachts and offshore structures.

From very beginning of its establishment, Delta Marine has begun to present integrated solutions covering basic design, production engineering, post-production services, advanced engineering analysis, project management, building supervision and consultancy. By following the latest developments both in professional and computer technologies Delta Marine’s continuously improved service quality has drawn big interest from clients. Thus the company has become the most reputable ship design consultancy in Turkey and a favorite partner in World market.

Delta Marine always cares about working with a multidisciplinary staff who bring added value into each phase of the design process. Throughout the years the company has always acted as an academia from where many young engineers and technicians have graduated. Delta Marine relies on blending the experience with dynamism to establish a strong, focused and efficient team while embracing different approaches in a manner to reach professional perfection.

Delta Marine follows the approach of client-focused design development and expanding the corporate knowledge by benefiting from every feedback which happens in various projects. This philosophy has been proven many times so that the organization started to be known as a solution creator providing economical, safe, comfortable, aesthetic and environment-friendly products to maritime sector. Today Delta Marine is proud to present a big fleet sailing in different parts of the World’s seas.
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MILGEM 
CORVETTE

The MILGEM project, from the Turkish words “MILLI GEMI” (National Ship), is the name of Turkish national warship program. MILGEM Corvette is a monohull, double screw type vessel designed to meet the speed, seakeeping and stability requirements of Turkish Naval Forces Command with using the principles of stealth technology in its design. The objectives of MILGEM corvette are to enhance the littoral warfare capabilities and to meet the operational requirements of Turkish Navy by introducing a platform which lies between the spectrum of frigate and patrol boat. MILGEM Corvette meets the reconnaissance, surveillance, target identification, early warning, defense of base and harbours, anti submarine warfare, surface to surface and surface to air warfare, amphibious operation and patrol requirements. The vessel is designed in collaboration with Savunma Teknolojileri Muhendislik (STM) of Turkey.

MAIN TASKS

- Economic exclusive zone (EEZ) monitoring & surveillance
- Coastal and offshore patrol & monitoring
- Conducting anti-surface (ASuW) and anti-submarine (ASW) operations
- Conducting Electronic Warfare (EW)
- Search and Rescue (SAR) operations
- To show flag
- Performing coordinated operations with other naval and air assets which take part at sea control operations
- Carrying out counter-terrorism activities at sea
MILGEM
CORVETTE

SPECS

CAPACITIES

Fuel (F-76) 170 t
JP-5 20 t
Fresh Water 42 t + 20 t / day

SPEED / ENDURANCE

Max Speed + 29.0 kn
Economical Speed 15.0 kn
Endurance 3500 nm @ 15 kn

MAIN DIMENSIONS

L oa 99.50 m
Lwl 90.54 m
Beam 14.40 m
Draught (design) 3.59 m
Displacement 2300 t

WEAPONS / SENSORS

• Combat Management System: G-MSYS
• Search Radar: SMART-S Mk2
• Weapon Control: STING EO Mk2
• Sonar: TBT-01 Yakamoz
• IPMS: UniMACS 3000
• Others: Laser/RF systems, ASW jammers, DG, SSTD
• Guns: 1 x 76 mm, 2 x 12.7 mm Stabilized Machine Gun, 8 x Harpoon
• Anti-aircraft missiles: 21 x RAM (PDMS)
• Torpedoes: 2 x 324 mm Mk.32 triple launchers

SHIP EQUIPMENT

• 2 x RHIB

ACCOMMODATION

• 93 including aviation officers, with accommodation for up to 106
• Galley, dry provisions, freezing rooms, wardroom/mess halls, offices, CIC etc.
• Length of stay at sea: 10 days (autonomous)
  21 days (with logistic support)

AVIATION FACILITIES

• Helicopter deck for landing and take off of helicopters up to 1 x 10 ton

SCOPE OF SERVICES

Conceptual Design
Contract Design
Production Engineering
Post Production Services
DeltaLoad Ship Loading Software
Advanced Engineering Analyses

REFERENCES

TCG HEYBELIADA
TCG BUYUKADA
LF-2400
LIGHT FRIGATE

LF-2400 is a monohull Light Frigate, designed to perform offshore patrol, ASuW, ASW, air defence operations and act as command & control ship, equipped with conventional diesel propulsion system, conforming naval norms/standards and classification rules. The vessel is designed in collaboration with Savunma Teknolojileri Muhendislik (STM) of Turkey.

MAIN TASKS

- Acting as command & control ship and participating in selected offensive operations
- Economic exclusive zone (EEZ) monitoring & surveillance
- Naval and Law Enforcement applications
- Coastal and offshore patrolling & monitoring
- Air Defence Duties
- Conducting anti-surface (ASuW) and anti-submarine (ASW) operations
- Air, surface and sub-surface surveillance and sea control including helicopter operations
- Engagement of surface, air and sub-surface targets
- Naval Gunfire Support (NGFS)
- Conducting Electronic Warfare (EW)
- Protection Seelines linking harbours to open seas
- Conducting special forces operations
- Search and Rescue (SAR) operations
LF-2400
LIGHT FRIGATE

CAPACITIES
Fuel (F-76) 320 t
JP-5 20 t
Fresh Water 40 t

SPEED / ENDURANCE
Max Speed + 27.0 kn
Max Cont. Speed 15.0 kn
Endurance 5000 nm @ 15 kn

MAIN DIMENSIONS
L OA 108.00 m
LWL 100.10 m
Beam 14.50 m
Draught (design) 3.60 m
Displacement 2350 t

WEAPONS / SENSORS
• Full 3-Dimensional Combat Management System
• 3D Surface and air Search Radar/IFF
• Fire Control Radar with EO Suit (TV/IR/LRF)
• E/O Director
• Electronic Warfare System (EWS)
• Laser Warning System
• SSM & SAM Launching System
• 1 x Forward Main Gun
• 2 x 12.7 or 20 or 30 mm Stabilized Platform Guns
• CHAFF RF/IR Decoy Control and Launching System
• Torpedo Launching System (triple launcher Port&Stbd)
• Hull Mounted Sonar (HMS)

SHIP EQUIPMENT
• 2 x RHIB
• 8 Life Rafts

AVIATION FACILITIES
• Helicopter deck for landing and take off of helicopters up to 1 x 10 tons
• JP-5 & HIFR system

ACCOMMODATION
• Comfortable accommodation for 99 crew (including air crew)
• Galley, dry provisions, freezing rooms, wardroom/mess halls, offices, etc.
• Length of stay at sea: 21 days

SCOPE OF SERVICES
• Conceptual Design
• Contract Design
• Production Engineering
• Post Production Services
• DeltaLoad Ship Loading Software
• Advanced Engineering Analyses

REFERENCES
No References Yet
C-1200 Corvette

C-1200 Corvette is a monohull vessel, designed to perform Anti-Surface, Anti-Air and Electronic Warfare, acting command & control ship, conducting special force operation, equipped with conventional diesel propulsion system, conforming naval norms/standards and classification rules. The vessel is designed in collaboration with Savunma Teknolojileri Muhendislik (STM) of Turkey.

MAIN TASKS

Acting as command&control ship and participating in selected offensive operations,

Economic exclusive zone (EEZ) monitoring&surveillance,

Naval and Law Enforcement applications,

Coastal and offshore patrolling&monitoring,

Air Defence Duties,

Conducting anti-surface operations,

Air and surface surveillance and sea control including helicopter operations,

Engagement of surface and air targets,

Naval Gunfire Support (NGFS),

Conducting Electronic Warfare (EW),

Protection Sealines linking harbours to open seas,

Conducting special force operations.
C-1200
CORVETTE

CAPACITIES

Fuel (F-76) 180 t
JP-5 20 t
Fresh Water 20 t

SPEED / ENDURANCE

Max Speed + 27.0 kn
Max Cont. Speed 15.0 kn
Endurance 3000 nm @ 15 kn

MAIN PROPULSION

Main Engine 2 x 2000 kW
Propeller | Propulsion 2 x Shaft & CPP
Diesel Generator 3 x 735 kW
Em’cy Generator 1 x 735 kW

ACCOMMODATION

• Comfortable accommodation for 57 crew
  (including 12 special force crew)
• Galley, dry provisions, freezing rooms, wardroom/mess halls, offices, CIC etc.
• Length of stay at sea: 21 days

MAIN DIMENSIONS

L oa 78.00 m
Lwl 74.37 m
Beam 12.00 m
Draught (design) 3.00 m
Displacement 1200 t

PLATFORM CAPABILITIES

• 2 x RHIB

WEAPONS / SENSORS

• SSM launching System
• SAM launching System
• 1 x 76 mm twin gun
• 2 x 30 mm STOP
• 3D Search Radar/IFF
• ARPA/LPI Navigation Radar
• Fire Control Radar with EO Suit
• E/O Director
• Mine Avoidance Sonar (MAS)
• ESM
• Laser Warning System

AVIATION FACILITIES

• Helicopter deck for landing and take off of helicopters up to 1 x 10 ton

SCOPE OF SERVICES

Conceptual Design
Contract Design
Production Engineering
Post Production Services
DeltaLoad Ship Loading Software
Advanced Engineering Analyses

REFERENCES

No References Yet
LCT-S
TANK LANDING CRAFT

LCT-S is a monohull vessel, designed to perform high speed amphibious operations with participation of joint and coalition forces and to be used as a transportation ship for civilian purposes, equipped with conventional diesel propulsion system, conforming naval norms/standards and classification rules.

MAIN TASKS

To provide flexibility and expedition during amphibious operations
To perform peace support, humanitarian aid and public evacuation
Transportation services for civilian purposes
LCT-S
TANK LANDING
CRAFT

SPECs

CAPACITIES
Fuel (F-76) 46 t
Fresh Water 128 t

SPEED / ENDURANCE
Max Speed 20.0 kn
Max Cont. Speed 19.0 kn
Endurance 900 nm

MAIN DIMENSIONS
L OA 72.28 m
LWL 69.13 m
Beam 13.15 m
Displacement 875 t

MAIN PROPULSION
Main Engine 2 x 2200 kW
Propeller | Propulsion 2 x Shafts & FPP
Diesel Generator 2 x 250 kW

ACCOMMODATION
• Comfortable accommodation for 18 crew
• Galley, dry provisions, wardroom/mess hall, office etc.
• Length of stay at sea: 7 days

WEAPONS / SENSORS
• Navigation Radar and Communication Systems
• 2 x 25 mm Stabilized Platform Guns
• 1 x 12.7 mm Machine Gun
• Ballistic protection

SHIP EQUIPMENT
• 1 x RHIB

TRANSPORTATION CAPACITY
• Well Dock Capacity: 420 m²
18 Unimogs or 5 Lorries or 5 Tanks or 30 Jeeps or 19 Armoured Vehicle
• Bow Door / Ramp System:
Load Capacity: 60 t

SCOPE OF SERVICES
• Conceptual Design
• Contract Design
• Production Engineering
• Post Production Services
• DeltaLoad Ship Loading Software
• Advanced Engineering Analyses

REFERENCES
• No References Yet

DELTA MARINE NAVY SHIPS DESIGN PORTFOLIO

COMBAT SHIPS
AMPHIBIOUS SHIPS
SUPPORT SHIPS
PATROL SHIPS
TRAINING SHIPS

DELTA MARINE NAVY SHIPS DESIGN PORTFOLIO

www.deltamarine.com.tr
LPD
LANDING PLATFORM DOCK

LPD is a monohull vessel, designed to perform amphibious and logistics support missions including high sea state conditions with large vehicle garage and helicopter deck, equipped with conventional all diesel-CPP propulsion system, conforming naval norms/standards and classification rules. The design was developed in collaboration with Savunma Teknolojileri Mühendislik (STM) of Turkey.

MAIN TASKS

To improve force projection capability
To provide flexibility and expedition during amphibious operations
To perform peace support, public evacuation, humanitarian aid and disaster relief operations, while accommodating and supporting a battalion size force and operations head quarters
**DELTA MARINE NAVY SHIPS DESIGN PORTFOLIO**

**SCOPE OF SERVICES**
- Conceptual Design
- Contract Design
- Production Engineering
- Post Production Services
- DeltaLoad Ship Loading Software
- Advanced Engineering Analyses

**REFERENCES**
- No References Yet

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**LPD**

**LANDING PLATFORM DOCK**

**SPECS**

### CAPACITIES
- **Fuel** (F-76) 700 t
- **JP-5** 200 t
- **Fresh Water** 300 t

### SPEED / ENDURANCE
- **Max Speed** 20.5 kn
- **Max Cont. Speed** 18.0 kn
- **Economical Speed** 14.0 kn
- **Endurance** +6000 nm @ 14 kn

### MAIN PROPULSION
- **Main Engine** 4 x 2500 kW
- **Propeller / Propulsion** 2 x Shafts & CPP
- **Diesel Generator** 4 x 1500 kW
- **Em’cy Generator** 1 x 750 kW

### MAIN DIMENSIONS
- **LOA** 171.66 m
- **LWL** 154.52 m
- **Beam** 27.00 m
- **Draught (design)** 5.50 m
- **Displacement** 13 500 t

### WEAPONS / SENSORS
- **1 x** RHIB
- **1 x** 25-ton crane (at starboard side) on helicopter deck
- **2 x** 40 mm twin guns
- **2 x** Phalanx CIWS (fore and aft)
- **4 x** 12.7 mm Machine Guns (STAMP)

### SHIP EQUIPMENT
- **1 x** 12.7 mm Machine Guns (STAMP)
- **1 x** 25-ton crane (at starboard side) on helicopter deck

### TRANSPORTATION FACILITIES
- **Dock Capacity:**
  - 4 x LCM or 2 x LCAC
- **Vehicle Garage:**
  - Area: 1285 m²
  - (13 Tanks and 21 APC/AAV)
- **Aviation Capabilities:**
  - Helicopter deck for 2 x 15 tons;
  - Hangar for 2 helicopters

### ACCOMMODATION
- Comfortable accommodation for 805 crew
- Galley, dry provisions, freezing rooms, wardroom/mess halls, offices, CIC etc.
- Length of stay at sea: 30 days

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**COMBAT SHIPS**

**AMPHIBIOUS SHIPS**

**SUPPORT SHIPS**

**PATROL SHIPS**

**TRAINING SHIPS**
AOR-22
FLEET TANKER

AOR-22 is a double-hull vessel, designed for providing logistics support to the ships at sea in terms of dry and liquid cargo both during peace and war, equipped with conventional all diesel-CPP propulsion system, conforming naval norms/standards and classification rules. The vessel is designed in collaboration with Savunma Teknolojileri Muhendislik (STM) of Turkey.

MAIN TASKS

Peacetime:
To provide logistics support to the ships at sea in term of dry and liquid cargo
To conduct limited SAR Operations through embarked helos

Wartime:
To provide logistics support to the ships at sea in term of dry and liquid cargo
To support ASW/ASuW operations through embarked helos
To provide limited medical support to the ships at sea
AOR-22
FLEET TANKER

CAPACITIES

- **F-76 / HSDO**: 12350 t (Cargo), 2050 t (Bunker)
- **Fuel (F-76)**: 588 t
- **JP-5**: 315 t (Cargo), 30 t (Bunker)
- **Fresh Water**: 1478 t (Cargo), 256 t (Bunker)
- **Dry Cargo**: 200 t
- **Dry Cargo (Ration)**: 400 t

SPEED / ENDURANCE

- **Max Speed**: 20.5 kn
- **Max Cont. Speed**: 20.5 kn
- **Endurance**: +10000 nm @ 15 kn

MAIN PROPULSION

- **Main Engine**: 2 x 7000 kW
- **Propeller / Propulsion**: 2 x Shafts & CPP
- **Diesel Generator**: 4 x 1080 kW
- **Em’cy Generator**: 1 x 300 kW

ACCOMMODATION

- **Comfortable accommodation for 239 persons**
- **Galley, dry provisions, freezing rooms, wardroom/mess halls, offices, CIC etc.**
- **Length of stay at sea: 15 days**

MAIN DIMENSIONS

- **LOA**: 171.00 m
- **LWL**: 165.25 m
- **Beam**: 27.00 m
- **Draught (design)**: 7.90 m
- **Displacement**: 21 930 t

PLATFOR M CAPABILITIES

- **4 x Stations for abeam replenishment of liquid cargo**
- **2 x Stations for abeam replenishment of solid cargo**
- **1 x Station for stern replenishment of liquid cargo**
- **2 x RHIB**
- **2 x Utility Boat**

WEAPONS / SENSORS

- **1 x Close In Weapon System (CIWS)**
- **2 x 12.7 mm Machine Guns**
- **2 x 25 mm Semi Automatic Guns with Tracking Radar/EOD**

AVIATION FACILITIES

- **Helicopter deck for landing and take off of Seaking size helicopters**
- **Helicopter hangar for 2 Seaking size helicopters**

SCOPE OF SERVICES

- Conceptual Design
- Contract Design
- Production Engineering
- Post Production Services
- DeltaLoad Ship Loading Software
- Advanced Engineering Analyses

REFERENCES

- No References Yet
LSS
LOGISTIC SUPPORT SHIP

Logistic Support Ship is a monohull vessel, designed to provide logistic support to marine units at sea in terms of dry and liquid cargo both during peace/wartime and flexibility for special operations through a helicopter landing deck. The vessel is equipped with conventional diesel propulsion system, conforming naval norms/standards and classification rules.

MAIN TASKS

Supplying ships at sea with food, fresh water, fuel, ammunition and weapons

Strategic sea transport, including debarkation and embarkation of staff and material

Receiving and utilizing waste from other ships
**DELTA MARINE NAVY SHIPS DESIGN PORTFOLIO**

**SCOPE OF SERVICES**
- Conceptual Design
- Contract Design
- Production Engineering
- Post Production Services
- DeltaLoad Ship Loading Software
- Advanced Engineering Analyses

**REFERENCES**
- No References Yet

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**SPECS**

**CAPACITIES**
- **F-76 / HSDO**
  - 3100 t (Cargo)
  - 123 t (Bunker)
- **JP-5**
  - 320 t (Cargo)
  - 13 t (Bunker)
- **Fresh Water**
  - 715 t (Cargo)
  - 67 t (Bunker)

**SPEED / ENDURANCE**
- Max Speed: 12.0 kn
- Max Cont. Speed: 10.0 kn
- Endurance: 15000 nm @ 10 kn

**MAIN DIMENSIONS**
- **L**
  - LOA: 114.25 m
  - LWL: 108.30 m
  - Beam: 16.80 m
  - Draught (design): 5.15 m
  - Displacement: 6993 t

**WEAPONS / SENSORS**
- Navigation Radar and Communication Systems
- 2 x 25 mm Machine Guns (fore and aft)

**SHIP EQUIPMENT**
- 2 x RHIB
- 1 x Utility Boat
- 1 x FAS station for stern replenishment of liquid cargo
- 2 x 6 t Cargo Hose Crane
- 1 x 3 t Provision Crane

**AVIATION FACILITIES**
- Helicopter deck for landing and take off of helicopters up to 1 x 10 ton

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**LSS LOGISTIC SUPPORT SHIP SPECS**

**ACCOMMODATION**
- Comfortable accommodation for 64 crew
- Galley, dry provisions, freezing rooms, wardroom/meet halls, offices etc.
- Length of stay at sea: 7 days
NFT
NAVY FLEET TANKER

Navy Fleet Tanker is a double-hull vessel, designed for providing logistic support to the ships at sea in terms of dry and liquid cargo both during peace and wartime, equipped with conventional all diesel-CPP propulsion system, conforming naval norms/standards and classification rules. The vessel is designed in collaboration with Savunma Teknolojileri Mühendislik (STM) of Turkey.

MAIN TASKS

To provide logistics support to the ships at sea in terms of dry and liquid cargo
To conduct limited SAR Operations through embarked helicopter
To support ASW/ASuW operations through embarked helicopter
To provide limited medical support to the ships at sea
NFT
NAVY FLEET TANKER

CAPACITIES

Fuel (F-76) 7500 t (Cargo)
1150 t (Bunker)

JP-5 175 t (Cargo)
35 t (Bunker)

Fresh Water 825 t (Cargo)
225 t (Bunker)

Dry Cargo 650 t

SPEED / ENDURANCE

Max Speed 20.0 kn
Max Cont. Speed 15.5 kn

Endurance 10 000 nm @ 15 kn

MAIN PROPULSION

Main Engine 2 x 6000 kW

Propeller | Propulsion 2 x Shafts & CPP

Diesel Generator 4 x 1050 kW

ACCOMMODATION

- Comfortable accommodation for 206 crew (extendable to 222 in total)
- Galley, dry provisions, freezing rooms, wardroom/mess halls, offices, CIC etc.
- Length of stay at sea:
  15 days (fresh provision)
  90 days (dry provision)

MAIN DIMENSIONS

L_{OA} 158.40 m
L_{WL} 155.86 m
L_{BP} 147.23 m

Beam 22.00 m

Draught (design) 6.85 m

Displacement (deep) 15 600 t

PLATFOR M CAPABILITIES

- 2 x Stations for abeam replenishment of liquid cargo
- 2 x Stations for abeam replenishment of solid cargo
- 1 x Station for stern replenishment of liquid cargo
- 2 x RHIB
- 1 x Utility Boat

WEAPONS / SENSORS

- 2 x Close in Weapon System (CIWS)
- 2 x 12.7 mm Machine Guns
- IR & Chaff
- Infra Red Surveillance & Tracking System

AVIATION FACILITIES

- Helicopter landing deck capable of day and night operations and VERTREP
- Helicopter hangar for 1 x Seaking helicopter and 1 x Dolphin helicopter

SCOPE OF SERVICES

- Conceptual Design
- Contract Design
- Production Engineering
- Post Production Services
- DeltaLoad Ship Loading Software
- Advanced Engineering Analyses

REFERENCES

- Pakistan Navy Fleet Tanker
MOSHIP
SUBMARINE RESCUE MOTHER SHIP

Submarine Rescue Mother Ship (MOSHIP) is a monohull vessel, designed to perform subsea and surface rescue missions including heavy seas, equipped with redundant diesel-electric propulsion system allowing flexible power share and strong position keeping, conforming naval norms/standards and classification rules.

MAIN TASKS
To provide life support to the crew of a damaged submarine
To rescue crew (up to 600 m. depth) in maximum 72 hours
To handle rescue and salvage operations for surface ships
To provide subsea repair works and wreck removal
MOSHIP
SUBMARINE RESCUE MOTHER SHIP

CAPACITIES
F-76 / HSDD 863 t
JP-5 21 t
Fresh Water 48 t

SPEED / ENDURANCE
Max Speed +18.0 kn
Max Cont. Speed 18.0 kn
Economical Speed 14.0 kn
Endurance +4500 nm @ 14 kn

MAIN DIMENSIONS
L<sub>oa</sub> 93.20 m
L<sub>WL</sub> 86.20 m
Beam 19.20 m
Draught (design) 4.75 m
Displacement 4537 t

WEAPONS / SENSORS
• Navigation Radar, Communication Systems and Underwater Telephone
• 2 x 12.7 Machine Guns (STAMP)

SHIP EQUIPMENT
• Atmospheric Diving Suit (ADS), Emergency Life Saving Support (ELSS), Remotely Operated Vehicle (ROV), Towed Side Scan Sonar (TSSS), Mc Cann Rescue Chamber
• 2 x 16 persons pressure chambers
• 1 x RHIB and 2 x Rescue Boats
• Transverse bow thruster, 1 x 1500 kW, Retractable azimuth bow thruster, 1 x 1200 kW, 360° steerable
• Helicopter deck for helicopters up to 12 tons

ACCOMMODATION
• Comfortable accommodation for own ship crew, rescue personnel and saved crew of 135+4 in total
• Galley, dry provisions, freezing rooms, 4 x wardroom/mess halls, offices, CIC, Crypto room etc.
• Length of stay at sea: 30 days

SCOPE OF SERVICES
• Conceptual Design
• Contract Design
• Production Engineering
• Post Production Services
• DeltaLoad Ship Loading Software
• Advanced Engineering Analyses

REFERENCES
• No References Yet
RATSHIP
RESCUE & TOWING SHIP

Rescue & Towing Ship (RATSHIP), is a monohull vessel, designed to perform subsea and surface rescue missions including heavy seas, equipped with conventional all diesel-CP propulsion system, with strong position keeping capability, conforming naval norms/standards and classification rules.

MAIN TASKS

To handle rescue and salvage operations for surface ships, to provide support for such operations.

To provide life support to the crew of a damaged submarine up to 600 m. depth, to provide support for rescue operations.

To handle subsea repair works, wreck removal.

To intervene with ship fires and sea-pollution.

To rescue crew of air vehicles landed/fallen into the sea.

To tow targets, to recover targets and torpedos during naval exercises.
## RATSHIP
### RESCUE & TOWING SHIP

### SPECS

#### MAIN DIMENSIONS

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<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tr>
<td>Lₙₙ</td>
<td>80.50 m</td>
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<tr>
<td>Beam</td>
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<tr>
<td>Draught (design)</td>
<td>4.20 m</td>
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<tr>
<td>Displacement</td>
<td>3 240 t</td>
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</table>

#### WEAPONS / SENSORS

- Navigation Radar, Communication Systems and Underwater Telephone
- 2 x 12.7 Machine Guns (STAMP)
- Atmospheric Diving Suit, Emergency Life Saving support, Side Scan Sonar, Remotely Operated Vehicle
- A hydraulic/telescopic crane of 20 tons to serve aft deck area
- Pressure chamber for 6 people
- A sick-bay with 4 beds, surgical intervention room and X-Ray room
- Subsea breathing air supply means

#### MANEUVERING EQUIPMENT

- Transverse bow thruster, 1 x 1200 kW
- Transverse stern thruster, 2 x 1200 kW
- Rectractable azimuth bow thruster, 1 x 1100 kW, 360° steerable

#### ACcommodation

- Comfortable accommodation for own ship crew, rescue personnel and saved crew of 104 (expandable to 108 in total)
- Galley, dry provisions, freezing rooms, 4 x wardroom/mess halls, offices, CIC, Crypto room etc.

### SCOPE OF SERVICES

- Conceptual Design
- Contract Design
- Production Engineering
- Post Production Services
- DeltaLoad Ship Loading Software
- Advanced Engineering Analyses

### REFERENCES

- No References Yet
OPV-D80

OFFSHORE PATROL VESSEL

OPV-D80 Offshore Patrol Vessel is a monohull vessel designed to perform surface rescue, surveillance and support missions including heavy sea conditions. The vessel equipped with conventional Diesel Engine-CPP propulsion system, conforms the naval norms, standards and classification rules. Vessel’s connection with land is maintained by helicopter and RHIB operations.

MAIN TASKS

Exclusive Economic Zone Surveillance
Fishery Inspection & Protection
Counter Drugs & Weapons Trafficking
Piracy & Smuggling Interdiction
Search & Rescue Operations
Disaster & Humanitarian Relief
Logistic Support
Firefighting
Pollution Control
OPV-D80
OFFSHORE PATROL VESSEL

CAPACITIES

F-76 / HSDO 300 t
JP-5 4 t
Fresh Water 60 t

SPEED / ENDURANCE

Max Speed +20.0 kn
Max Cont. Speed 14.0 kn
Economical Speed 12.0 kn
Endurance 6 000 nm

MAIN DIMENSIONS

L oa 84.20 m
Lwl 80.80 m
Lbp 78.65 m
Beam 14.00 m
Draught (design) 3.25 m
Displacement 1 750 t

WEAPONS / SENSORS

• Main Forward Gun up to 76 mm
• 2 x 12.7 mm Stabilized Platform Machine Guns (STAMP)
• Medium Range Survival Radar
• E/O Fire Control Sensor

SHIP EQUIPMENT

• 1 x 10 t Telescopic Crane for handling container
• 2 x RHIB
• 2 x Containerized Mission Modules
• 1 x Stern Launching Ramp
• Wave Compensated Davit (sea state 5)

ACCOMMODATION

• Comfortable accommodation for 66 crew and 14 spares
• Spacious bridge
• Separate OPS room for surveillance and gun control
• Flight office, administrative office, ship office
• Galley, dry provision, pantry, wardroom/mess halls, etc.
• Length of stay at sea: 21 days

SCOPE OF SERVICES

Conceptual Design
Contract Design
Production Engineering
Post Production Services
DeltaLoad Ship Loading Software
Advanced Engineering Analyses

REFERENCES

No References Yet
FBP-D60
FAST PATROL BOAT

OPV-D80 Offshore Patrol Vessel is a monohull vessel designed to perform surface rescue, surveillance and support missions including heavy sea conditions. The vessel equipped with conventional Diesel Engine-CPP propulsion system, conforms the naval norms, standards and classification rules. Vessel’s connection with land is maintained by helicopter and RHIB operations.

MAIN TASKS

- Exclusive Economic Zone Surveillance
- Counter Drugs & Weapons Trafficking
- Piracy & Smuggling Interdiction
- Search & Rescue Operations
- Disaster & Humanitarian Relief
- Pollution Control
- Fishery Inspection & Protection
FBP-D60

FAST PATROL BOAT

SPECS

CAPACITIES
Fuel (F-76) 90 t
Fresh Water 30 t

SPEED / ENDURANCE
Max Speed 28.0 kn
Max Cont. Speed 18.0 kn
Economical Speed 12.0 kn
Endurance 2200 nm @ 18 kn

MAIN DIMENSIONS
Loa 62.00 m
Lwl 58.75 m
Lbp 56.55 m
Beam 9.60 m
Draught (design) 2.65 m
Displacement 560 t

WEAPONS / SENSORS
• Main Forward Gun up to 76 mm
• 2 x 12.7 mm Stabilized Platform Machine Guns (STAMP)
• Medium Range Survival Radar
• E/O Fire Control Sensor

SHIP EQUIPMENT
• 1 x RHIB
• 1 x Stern launching ramp

ACCOMMODATION
• Comfortable accommodation for 44 crew and 11 spares
• Spacious bridge
• Separate OPS room for surveillance and gun control
• Administrative office, ship office
• Galley, dry provision, pantry, wardroom/mess halls, etc.

SCOPE OF SERVICES
• Conceptual Design
• Contract Design
• Production Engineering
• Post Production Services
• DeltaLoad Ship Loading Software
• Advanced Engineering Analyses

REFERENCES
No References Yet
Special Force Attack Boat is a high speed, single deck, deep V type, planing vessel with high manoeuvring abilities and low ship signatures and having its mission defined as carrying the materials and explosive equipment that would be needed by special forces mission units during underwater attack missions, in compliance with military norms and standards and with classification society’s rules.

**MAIN TASKS**

- Counter terrorist protection of the coastal and offshore installations
- Search and Rescue operations
- Anti smuggling operations
- To meet Police, Customs, Health Authority etc. missions as to be reconfigured upon request
SAT
SPECIAL
FORCE BOAT

SPECS

CAPACITIES
Fuel (F-76) 6.3 t
Fresh Water 2.4 t

SPEED / ENDURANCE
Max Speed +50.0 kn
Max Cont. Speed +30.0 kn
Economical Speed 15.0 kn
Endurance 350 nm @ 45 kn

MAIN PROPULSION
Main Engine 2 x 1790 kW
Propeller | Propulsion 2 x Water Jets & Gearboxes

ACCOMMODATION
• 16 pax UAT personnel cabin
• 4 pax capacity wounded person transferring cabin
• Crypto cabin
• The possibility to accommodate 8 more UAT unit chair

MAIN DIMENSIONS
\( L_{OA} \) 28.00 m
\( L_{WL} \) 23.29 m
Beam 6.00 m
Draught (design) 1.13 m
Displacement 50 t

WEAPONS / SENSORS
• Navigation Radar
• 2 x 12.7 mm Machine Guns
• 1 x 12.7 mm Stabilized Platform Machine Guns
• 2 x 40 mm Grenade Launcher
• Reduced Radar Cross Section

SHIP EQUIPMENT
• 2 x RHIB

CAPABILITIES
• The capability to perform missions in Black Sea, Mediterranean Sea and Aegean Sea fully for 3 sea state and limited for 4 and 5 sea states
• Low ship signatures: Low Radar Cross Section Area, low infrared signature and low acoustic signature
• Aluminium alloy construction providing easy maintenance and repair possibility
• Two propulsion systems, each including a diesel engine, a gearbox and a waterjet, totally independent from each other and high maneuverability

SCOPE OF SERVICES
■ Conceptual Design
■ Contract Design
■ Production Engineering
■ Post Production Services
■ DeltaLoad Ship Loading Software
■ Advanced Engineering Analyses

REFERENCES
↓ No References Yet

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HSBP-D35
HIGH SPEED PATROL BOAT

HSPB-D35 High Speed Patrol Boat is a mono-hull deep V vessel designed to perform surface rescue, surveillance and support missions including heavy sea conditions. Mastery of the littoral cannot be presumed. It does not derive directly from command of the high seas. It is an objective which requires our focused skills and resources. The vessel equipped with conventional Diesel Engine-Water jet propulsion system, conforms the naval norms, standards and classification rules. HSPB-D35 “High Speed Patrol Boat” has improved sea keeping, stealth characteristics and is able to carry larger mission equipment/payload such as a 30 mm stabilized gun, EO sensors, gun fire control systems.

MAIN TASKS
Patrol / Escort / Fast attack
Anti-piracy operations
Anti-terrorist protection of the coastal and offshore installations
Surveillance / Covert surveillance
Search and rescue operations
Anti smuggling operations
HSBP-D35
HIGH SPEED PATROL BOAT
SPECS

CAPACITIES
Fuel (F-76) 18.0 t
Fresh Water 2.0 t

SPEED / ENDURANCE
Max Speed 45.0 kn
Max Cont. Speed 20.0 kn
Endurance 600 nm @ 20 kn

MAIN DIMENSIONS
LOA 34.50 m
LWL 28.70 m
BP 28.70 m
Beam 7.50 m
Draught (design) 1.60 m
Displacement 110 t

WEAPONS / SENSORS
• Navigation Radar and Communication Systems
• 1 x 12.7 mm Stabilized Platform Machine Guns (STAMP)
• Reduced Radar Cross Section (RCS)

SHIP EQUIPMENT
• 1 x RHIB

ACCOMMODATION
• Accommodation for 15 Crew
• Galley, mess rooms

SCOPE OF SERVICES
Conceptual Design
Contract Design
Production Engineering
Post Production Services
DeltaLoad Ship Loading Software
Advanced Engineering Analyses

REFERENCES
No References Yet

DELTA MARINE NAVY SHIPS DESIGN PORTFOLIO
COMBAT SHIPS
AMPHIBIOUS SHIPS
SUPPORT SHIPS
PATROL SHIPS
TRAINING SHIPS
MBH1774
NAVAL TRAINING SHIP

MBH1774 is a monohull vessel, designed for Naval cadets’ short and long term active onboard theoretical and practical training including heavy seas, equipped with every aspects of a real training ship, conforming naval norms/standards and classification rules. The vessel is designed in collaboration with Savunma Teknolojileri Muhendislik (STM) of Turkey.

MAIN TASKS

To accommodate 100 cadets and their trainers, providing long term open seas training

To show flag all around the World

To serve as helicopter landing/take-off training platform
MBH1774
NAVAL
TRAINING SHIP

CAPACITIES
Fuel (F-76) 210 t
JP-5 20 t
Fresh Water 75 t

SPEED / ENDURANCE
Max Speed 18.0 kn
Max Cont. Speed 16.0 kn
Endurance 4500 nm @ 16 kn

MAIN DIMENSIONS
L OA 103.00 m
LWL 90.50 m
Beam 16.00 m
Draught (design) 3.60 m
Displacement 2 630 t

WEAPONS / SENSORS
• ARPA Navigation Radar
• 1 x 76 mm or similar forward gun (optional)
• 2 x 12.7 or 25 mm Stabilized Platform Machine Guns (STAMP/STOP) (optional)

SHIP EQUIPMENT
• 1 x RHIB
• 2 x Rescue boats

AVIATION FACILITIES
• Helicopter deck for landing and take off of helicopters up to 1 x 10 tons

ACCOMMODATION
• Comfortable accommodation for 120 crew (including 20 trainers) and 100 cadets.
• Training Bridge, Training CIC, Training Radio Room, Damage Control and Fire Fighting Training Compartments, Classrooms
• Galley, dry provisions, freezing rooms, wardroom/mess halls, offices, CIC etc.
• Length of stay at sea: 20 days

SCOPE OF SERVICES
• Conceptual Design
• Contract Design
• Production Engineering
• Post Production Services
• DeltaLoad Ship Loading Software
• Advanced Engineering Analyses

REFERENCES
No References Yet
MBH1773 class Training Ship is a monohull vessel, designed for long term on board training activities of cadets, equipped with every aspects of a real training ship, conforming naval norms/standards and classification rules. The vessel is designed in collaboration with Savunma Teknolojileri Muhendislik (STM) of Turkey.

**MAIN TASKS**

- To accommodate 60 cadets and their trainers, providing long term open seas training
- To show flag all around the World
- To serve as helicopter landing/take-off training platform
- To carry out Command&Control Ship tasks in wartime
### MBH1773

#### NAVAL TRAINING SHIP

**SPECS**

#### CAPACITIES

| Fuel (F-76) | 275 t |
| JP-5       | 20 t  |
| Fresh Water| 100 t |

#### SPEED / ENDURANCE

- Max Speed: 21.0 kn
- Max Cont. Speed: 15.0 kn
- Endurance: 4500 nm @ 15 kn

#### MAIN DIMENSIONS

- $L_{oa}$: 101.70 m
- $L_{wl}$: 91.72 m
- Beam: 16.00 m
- Draught (design): 4.10 m
- Displacement: 2915 t

#### WEAPONS / SENSORS

- Command & Control, Fire Control, Navigation and Communication Systems
- 1 x 76 mm. or similar forward gun
- 2 x 12.7 or 25 mm. Stabilized Platform Machine Guns (STAMP/STOP)
- CWS/PDMS System (optional)
- Sonar System (optional)

#### SHIP EQUIPMENT

- 1 x RHIB
- 1 x Service Boat

#### AVIATION FACILITIES

- Large helicopter deck for 15 t helicopters, suitable for landing/take-off exercises;
- Telescopic hangar

#### ACCOMMODATION

- Accommodation for 60 cadets, 108 crew and trainers
- Training Bridge, Training CIC, Training Radio Room, Training MCR, Damage Control and Fire Fighting Training Compartments, Classrooms
- Galley, dry provisions, freezing rooms, wardroom/mess halls, offices, CIC etc.
- NBC Protection
- Length of stay at sea: 30 days

#### MAIN PROPULSION

- Main Engine: 2 x 5000 kW
- Propeller | Propulsion: 1 x Shafts & CPP
- Diesel Generator: 4 x 588 kW

#### SCOPE OF SERVICES

- Conceptual Design
- Contract Design
- Production Engineering
- Post Production Services
- DeltaLoad Ship Loading Software
- Advanced Engineering Analyses

#### REFERENCES

No References Yet
NDTSB
NAVAL DIVE TRAINING & SUPPORT BOAT

Naval Dive Training - Support Boat is a monohull all steel vessel, designed to perform Dive Training missions including SAR, salvage, ROV operations, equipped with conventional all diesel-FPP propulsion system, conforming naval norms/standards and classification rules. The vessel is designed in collaboration with Savunma Teknolojileri Muhendislik (STM) of Turkey.

MAIN TASKS

- Basic Diving Trainings
- Air SCUBA Diving Trainings
- Mixed-Gas SCUBA Diving Trainings (Air)
- Surface Supplied Diving Trainings (Mixed-Gas)
- Open (Wet) Bell Operations
- Recompression Chamber Operations
NDTSB
NAVAL DIVE TRAINING & SUPPORT BOAT

**CAPACITIES**

- Fuel (F-76) 25 t
- Fresh Water 30 t

**SPEED / ENDURANCE**

- Max Speed 16.0 kn
- Max Cont. Speed 14.0 kn
- Endurance 1300 nm @ 14 kn

**MAIN DIMENSIONS**

- $L_{oa}$ 33.90 m
- $L_{wl}$ 31.00 m
- Beam 8.00 m
- Draught (design) 1.50 m
- Displacement 200 t

**WEAPONS / SENSORS**

- Search and Rescue Operations,
- Limited scale Salvage Operations,
- ROV Operations,
- Side Scan Sonar Operations,
- Underwater Surveys.

**SHIP EQUIPMENT**

- Air&Gas Supply System with Diving Control Station and storage
- 3 persons Decompression Chamber
- SWL 2.5 t Knuckle Boom Crane
- 1 x RHIB
- Bow Thruster and Stern Anchor for position keeping
- Communication and Navigation Systems
- Single Beam Echo Sounder

**ACCOMMODATION**

- Comfortable accommodation for 6 crew, with galley and mess
- 25-30 dive trainee day capacity with separate mess/briefing-training room

**SCOPE OF SERVICES**

- Conceptual Design
- Contract Design
- Production Engineering
- Post Production Services
- DeltaLoad Ship Loading Software
- Advanced Engineering Analyses

**REFERENCES**

No References Yet
E-CLASS
TRAINING SHIP

Naval Dive Training - Support Boat is a monohull all steel vessel, designed to perform Dive Training missions including SAR, salvage, ROV operations, equipped with conventional all diesel-FPP propulsion system, conforming naval norms/standards and classification rules. The vessel is designed in collaboration with Savunma Teknolojileri Muhendislik (STM) of Turkey.

MAIN TASKS
To accommodate 6 corporals and conscripts, providing long term sea training
To provide navigational practice
Anti-piracy operations as a secondary mission
To participate Search and Rescue Operations as a secondary mission
### E-CLASS
#### TRAINING SHIP

**CAPACITIES**
- Fuel (F-76) 9 t
- Fresh Water 6 t

**SPEED / ENDURANCE**
- Max Speed 12 kn
- Max Cont. Speed 12 kn
- Economical Speed 12 kn
- Endurance 2250 nm @ 12 kn

**MAIN DIMENSIONS**
- LOA 28.80 m
- Beam 6.00 m
- Draught (design) 1.20 m
- Displacement 76 t

**WEAPONS / SENSORS**
- Navigation Radar and Communication Systems

**SHIP EQUIPMENT**
- 1 x RHIB

**AVIATION FACILITIES**
- Helicopter deck for landing and take off of helicopters up to 1 x 10 ton

**MAIN PROPULSION**
- Main Engine 2 x 279 kW
- Propeller | Propulsion 1 x Shafts & FPP
- Diesel Generator 2 x 92 kW

**ACCOMMODATION**
- Accommodation for 10 Crew
- Galley, Mess Room, CIC

**SCOPE OF SERVICES**
- Conceptual Design
- Contract Design
- Production Engineering
- Post Production Services
- DeltaLoad Ship Loading Software
- Advanced Engineering Analyses

**REFERENCES**
- TCG E-1 (A-1531)
- TCG E-2 (A-1532)
- TCG E-3 (A-1533)
- TCG E-4 (A-1534)
- TCG E-5 (A-1535)
- TCG E-6 (A-1536)
- TCG E-7 (A-1537)
- TCG E-8 (A-1538)
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