



State Enterprise Specialized Foreign Trade Firm

PROGRESS



UKROBORONPROM

Ukrainian Defence Industry

SHIP BUILDING INDUSTRY

WE DO:

- design and construction of combat ships and civil vessels
- development and production of gas turbine engines
- hydro-acoustic systems and complexes
- floating docks construction
- repair and upgrade of marine equipment
- component parts for shipboard systems and equipment





"KALKAN-MP"



PATROL WATER-JET BOAT

It is designed for line of duty on state borders protection on the rivers, lakes, sea coastal areas and services providing for maritime checkpoints.

Main Specifications:

Displacement, full load	8,66 t
Cruising range	270 (500) miles (km)

Length, overall: 11,75 m

Beam, overall: 3,30 m

Height midships: 1,67 m

Draft midships: 0,56 m

Speed: not less than 36 knots

Complement: 3



GYURZA

ARMORED RIVER GUNBOAT

Designed to guard state borders, monitor shipping on border rivers, lakes and other basins.



Sensors and Communication:

- Navigation radar
- Optoelectronic monitoring system
- Integrated bridge system



Weapons:

- BMP-2 turret: 1x30 mm double-belt automatic gun; 1, ATGM Launcher; 7,62 mm machine gun
- BTR-70/80 turret: 1x14,5 mm Heavy machine gun; 1x7,62 mm machine gun

Main Specifications:

Displacement, full load	38,4 t
Endurance	5 days
Range (at 11 kts)	not less 450 NM
Propulsion	2 diesels

Length, overall: 20,3 m

Beam, overall: 4,9 m

Draught, max: 0,9 m

Max speed: not less 28 kts

Complement: 5



GAYDUK-M

MULTIPURPOSE CORVETTE

The corvette searches and detects surface and underwater targets, as well as takes air, surface and underwater countermeasures.



Length, overall:
85,5 m



Beam, overall:
10,2 m



Draught, on design WL:
3,1 m



Max speed:
not less 28-32 kts



Complement:
52



Sensors and Communication:

- SMART Mk2 3D Air/Surface surveillance radar
- Over the Horizon Surface Targeting radar
- Sting EO Optical-Radar Fire Control System
- Optoelectronic Fire Control System
- TACTICOS CMS
- ESM and Chaff decoy launcher
- OESM
- Hull mounted sonar
- Intruder detection sonar
- Navigation radar
- Integrated bridge system



Weapons:

- 2x4 MM40 Block3 SSM
- 8 MICA VL SAM system
- 76 mm OTO Melara gun
- 35 mm Millennium gun
- 2x12,7 mm machine guns
- 2x2 - 324 mm torpedo launchers
- 2 ASW Rocket Launchers (option)
- Helicopter up to 6 t

Main Specifications:

Displacement, full load	1200 t
Endurance	14 days
Range (at 14 kts)	not less 3500 NM
Propulsion	CODAD /CODAG



"PROJECT 58130S"

FAST PATROL BOAT

It is designed for fulfilling the following tasks:

- national sea border protection;
- providing service of maritime checkpoints;
- interception and inspection of non-compliant vessels;
- patrolling sea economical area;
- participation in maritime rescue operations;
- implementation of maritime people transport operations.



Length, overall:
24,40 m



Beam, overall:
5,20 m



Height midships:
2,82 m



Draught, max:
1,57 m



Speed:
37 knots



Complement:
9



Main Specifications:

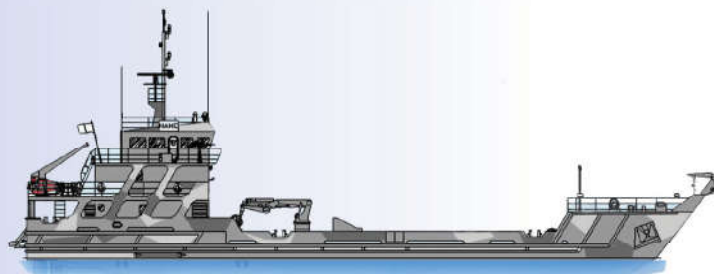
Displacement, full load	39,70 t
Cruising range	not less than 500 miles



"BOBR"

LANDING CRAFT/ MILITARY TRANSPORT

Designed to land the marines and its weapons and equipment to the unequipped shore.



Sensors and Communication:

- 2 Navigation radar
- FLIR system
- Integrated bridge system



Weapons:

- 2x12,7 mm MGs



Length, overall:
53,00 m



Beam, overall:
10,00 m



Draught, max:
1,90 m



Displacement, full load:
about 700 t



Complement:
12

Main Specifications:

Propulsion	2 diesels
Max speed	12 kts
Range (at 10 kts)	not less 1800 NM
Endurance	8 days
Landing force capacity:	
■ 3 MBT or 5 APV	
■ up to 70 commandos	



Sensors and Communication:

- Surveillance radar
- Navigation radar
- Optoelectronic fire control system
- Integral bridge system



Weapons:

- Combat module: 30 mm gun; 7,62 mm machine gun
- 2 x 12,7 mm MGs
- Fast interceptor boat (6 prs)

Main Specifications:

Range (at 14 kts)	2500 NM
Propulsion	2 diesels
Endurance	15 days

"CORAL"

PATROL CRAFT

Designed to guard the inviolability of the state borders and the state sovereign rights in its EEZ, to take a part at the organized crime control, to counteract the illegal immigration at the state boarders, as well as to take a part at the search and rescue operations.

Length, overall:
49,0 m



Beam, overall:
9,4 m



Draught, max:
2,2 m



Max speed:
29 kts



Displacement, full load:
300 t



Complement:
24

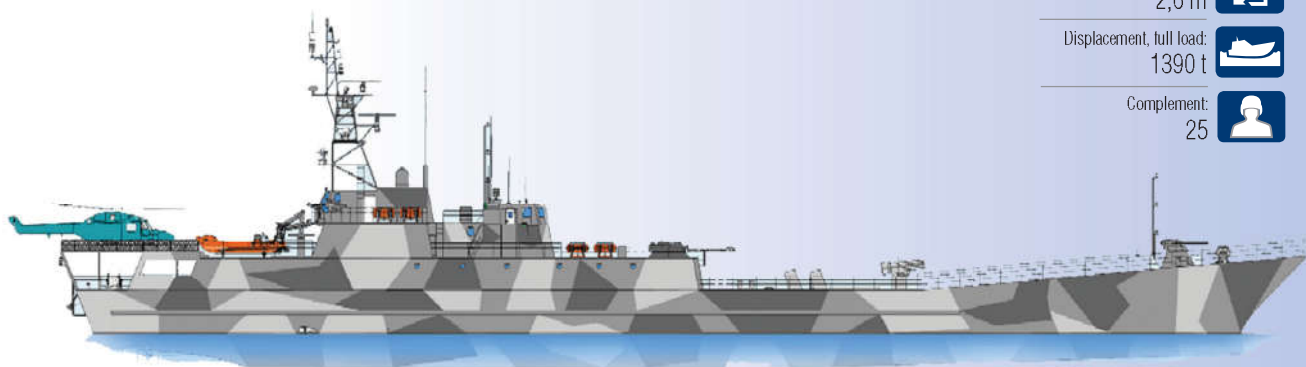




"TRITON"

LANDING SHIP TANK

Designed to land the marines and its weapons and equipment to the unequipped shore.



Length, overall:
87,9 m



Beam, overall:
10,0 m



Draught, max:
2,6 m



Displacement, full load:
1390 t



Complement:
25



Sensors and Communication:

- Surveillance radar
- Navigation radar
- Optoelectronic Fire Control system
- Integrated bridge system



Weapons:

- 122 mm gun
- 2x20 122 MBLS, BM-21 type
- 1x30 mm Combat module
- 2 Close-in SAM systems

Main Specifications:

Propulsion	2 diesels
Max speed	not less 17 kts
Range (at 12 kts)	3500 NM
Endurance	15 days
Landing force capacity:	
■ 5 MBT or 10 APV	
■ up to 100 commandos	



"BRIZ-40M"

FAST PATROL BOAT

Is designed to operate at the inland seas and at the coastal regions of the open seas for the combat duty, the struggle against enemy boats, the protection of warships and ships at the outer harbor mooring.



Sensors and Communication:

- Navigation Radar
- OE surveillance System
- Intruder detection Sonar
- Laser detection System
- Chaff decoy System
- Integrated internal and external communication system
- Integrated bridge system



Weapons:

- Naval Missile Guided Weapon System
- Light weapon-system (module): 12,7 mm machine gun, 40 mm grenade launcher
- Small arms



Length, overall:
25,5 m



Beam, overall:
5,2 m



Draught, max:
1,5 m



Displacement, full load:
47,8 t



Max speed:
not less 35 kts

Main Specifications:

■ Diesels	2x1430 kW
■ Range (at 15 kts)	not less 500 NM
■ Endurance	5 days



Sensors and Communication:

- Navigation Radar
- OE surveillance System
- Intruder detection Sonar
- Laser detection System
- Chaff decoy System
- Integrated internal and external communication system
- Integrated bridge system



Weapons:

- Light weapon-system (module): 12,7 mm machine gun, 40 mm grenade launcher
- Small arms

Main Specifications:

■ Diesels	2x1430 kW
■ Range (at 15 kts)	not less 500 NM
■ Endurance	5 days

"BRIZ-40P"

FAST COAST GUARD BOAT

Is designed for the safeguarding of the state's borders, the safeguarding of the state's sovereign rights at the EEZ, participating at the fight against organized crime and at the countermeasures against illegal migration at the state's borders.

Length, overall:
25,5 m

Beam, overall:
5,2 m

Draught, max:
1,6 m

Displacement, full load:
46,5 t

Max speed:
not less 38 kts





"PC655"

MULTIPURPOSE FAST CORVETTE

Designed to counteract surface ships of «corvette» or «missile boat» class; search and destroy diesel submarines, guard convoys and transport vessels.

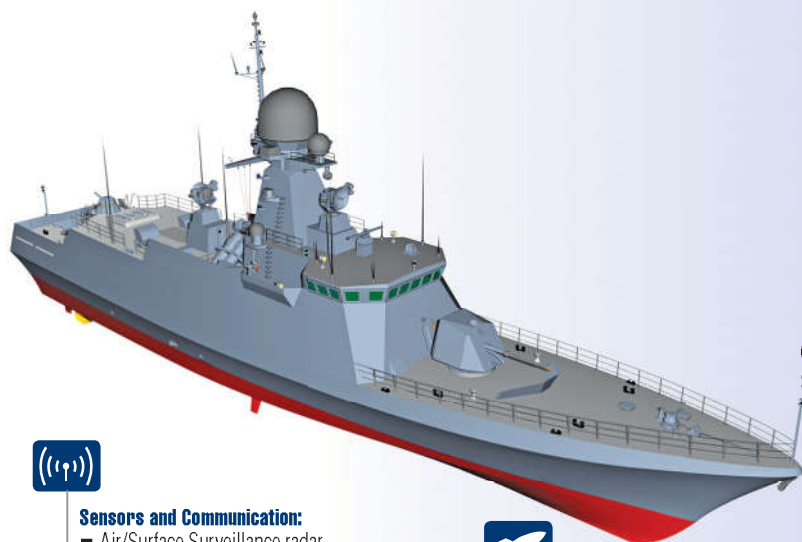


	Length, overall: 67,70 m
	Beam, overall: 10 m
	Draught, max: 4,7 m
	Displacement, full load: 640 t
	Max speed: not less 32 kts

Main Specifications:

Propulsion	4 diesels
Endurance	8 days
Range (at 14 kts)	4000 NM

The weapons and sensors could be specified in accordance with the Customer's requirements



Sensors and Communication:

- Air/Surface Surveillance radar
- Long range over the Horizon Targeting Radar
- Optical Radar Fire Control System
- Optoelectronic Fire Control System
- ESM
- Sonar System
- Navigation Radar
- Integrated bridge system



Weapons:

- 2x4 SSM
- Short range SAM system
- 57-76 mm gun
- 30-35 mm gun
- Torpedo Launchers (option)
- Chaff decoy launchers

Main Specifications:

Range (at 14 kts)	2000 NM
Endurance	14 days
Propulsion	CODAG

"MUSSON"

MULTIPURPOSE CORVETTE

Designed to counteract surface ships of «corvette» or «missile boat» class; search and destroy diesel submarines, guard convoys and transport vessels.

Length, overall:	60,50 m	
Beam, overall:	11,50 m	
Draught, max:	4,00 m	
Displacement, full load:	680 t	
Max speed:	not less 32 kts	
Complement:	35	



"CARACAL"

FAST ATTACK CRAFT

Purpose: The craft searches and detects surface and underwater targets, as well as takes air, surface and underwater countermeasures.



Length, overa:
59,8 m



Beam, overall:
9,2 m



Draught, max:
2,6 m



Displacement, full load:
250 t



Max speed:
not less 26 kts

The weapons and sensors could be specified in accordance with the Customer's requirements.



Sensors and Communication:

- Air/Surface Surveillance radar
- Long range over the Horizon Targeting radar
- Optical Radar Fire Control System
- Optoelectronic Fire Control System
- ESM
- Navigation Radar
- Sonar
- Intruder detection Sonar
- Integrated bridge system



Weapons:

- 2x2 SSM
- Close-in SAM system
- 57-76 mm gun
- 30-35 mm gun
- Chaff decoy launchers
- ASW Rocket Launcher

Main characteristics::

Endurance	15 days
Complement	33
Propulsion	3 diesels
Range	not less 2000 NM at 14 kts



"58250 PROJECT"

CORVETTE

Designed to fulfill peacetime missions, conduct combat and special operations; to conduct the battle operations and special operations independently either as part of naval task forces or groups of diverse forces.



Sensors and Communication:

- 3D Air/Surface long range Surveillance radar
- 3D Air/Surface middle range Surveillance radar
- Long range over the Horizon Targeting radar
- CMS
- Optical Radar Fire Control System
- Optoelectronic Fire Control System
- Hull mounted sonar and Towed array sonar
- ESM/ECM/OECM
- Navigation Radar
- Integrated bridge system



Weapons:

- 2x4 SSM launchers
- SAM system middle range
- 76 mm gun
- 2x1 35 mm guns
- 2x3 324 mm torpedo launchers
- 2x12,7 mm machine guns
- Chaff decoy launchers
- Multipurpose helicopter up to 11 t

Main Specifications:

Range (at 14 kts)	4000 NM
Propulsion	CODOG

Length, overall:
112,0 m

Beam, overall:
13,50 m

Draught, max:
3,50 m

Displacement, full load:
2650 t

Max speed:
not less 30 kts

Complement:
110





GURZA-M

SMALL ARMORED BOAT



	Length, overall: 23,0 m
	Beam, overall: 4,8 m
	Draught, max: 1,0 m
	Displacement, full load: 54 t
	Max speed: not less 25 kts



Sensors and Communication:

- Navigation radar
- Optoelectronic monitoring system
- Detection sensors of laser emission
- Integrated bridge system



Weapons:

- 2 combat modules type of «Katran-M»:
- 30 mm gun
- 30 mm grenade launcher
- 7.62 mm machine gun
- ATGM "Barrier" type
- Portable SAM
- Mining facility

Main Specifications:

Endurance	5 days
Complement	5
Propulsion	2 diesels
Range (at 12 kts)	not less 900 NM



"DOZOR"

OFFSHORE PATROL VESSEL

Designed to secure the state borders and the state sovereign rights in the Exclusive (Sea) Economic Zone.



Sensors and Communication:

- Surveillance radar
- Navigation radar
- Optoelectronic fire control system
- Integrated bridge system



Weapons:

- 76 mm gun
- 30 mm gun
- Fast interceptor boat

Main Specifications:

Range (at 12 kts)	3800 NM
Endurance	15 days
Propulsion	2 diesels

Length, overall:
73,70 m



Beam, overall:
10,98 m



Draught, max:
3,5 m



Displacement, full load:
960 t





"KENTAVR"

FAST ASSAULT CRAFT

Purpose: Fast and secret delivery of marines or special forces, fire-support of land flank under engagement in littoral and inland waters (estuaries, rivers and water-storage basins) at the range from safe port up to 100 miles.



Length, overall:
24,3 m



Beam, overall:
4,8 m



Draught, max:
1,0 m



Displacement, full load:
47 t



Max speed:
not less 35 kts



Sensors and Communication:

- Navigation radar
- Optoelectronic monitoring system
- Detection sensors of laser emission



Weapons:

- 2 combat modules:
- 12,7 mm machine gun;
- 40 mm grenade launcher (NATO standard)

Main Specifications:

Propulsion	2 diesels
Range (at 11 kts)	not less 500 NM
Endurance	5 days
Landing force capacity	26-28 commandos



Sensors and Communication:

- Air/Surface Surveillance radar
- Long range over the Horizon Targeting Radar
- Optical-radar Fire Control System
- ESM
- Navigation radar
- Integrated bridge system



Weapons:

- 35 mm gun
- 2x2 SSM

Main Specifications:

Range (at 15 kts)	2000 NM
Endurance	10 days
Propulsion	2 diesels

"PEARL - FAC"

ATTACK CRAFT-MISSILE

Designed to counteract the surface ships of missile boat type.

Length, overall:
48,95 m



Beam, overall:
9,40 m



Draught, max:
2,35 m



Displacement, full load:
340 t



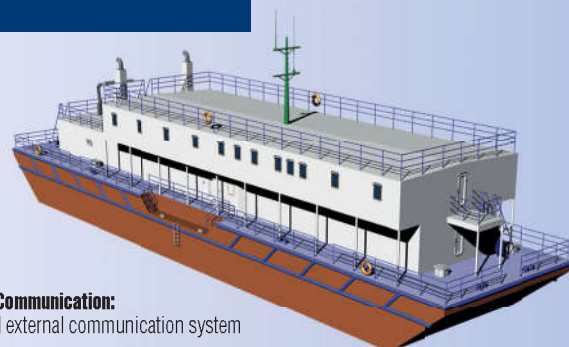
Max speed:
not less 26 kts





NON-SELF-PROPELLED INTEGRATED SUPPORT VESSEL FOR COAST GUARD

Designed to base at the sea coast, navigable waterways and lakes for the purpose of locating the coast guard boats and supporting them by fuels and lubricants, fresh water, collection and utilization of sewage water. 25 persons of crews from boats could be accommodated at the single and double cabins.



Sensors and Communication:

- Internal and external communication system



Length, overall:
43,0 m



Beam, on design WL:
41,0 m



Draught, max:
10,0 m



Displacement, full load:
900 t

Main Specifications:

2 Diesel generators	2 x 125 kW
Main switchboard	
Specifics:	
Repair areas: machine-shop – about 65 m ² , equipped with machine tool holding.	
Tanks capacity:	
fuel	45,0 m ³
fresh water	12,0 m ³
oil-containing water	3,0 m ³
sewage	12,0 m ³



“KONAN 750BR”

FAST ARMORED BOAT

The boat is designed for rescue operations, patrolling and other similar tasks. The patrol boat has complete armored protection for the crew. The bulletproof wheelhouse is made of armored glass. 12,7mm machine-gun mount is used as armament and controlled from the wheelhouse hatch.

Main Specifications:

Transom deadrise angle	22 deg.
Midship deadrise angle	25 deg.
Capaciousness	6 person
Number of seats	5 pcs.
Weight, empty	2,400 kg
Carrying capacity	1,000 kg
Weight, full	3,400 kg
Fuel volume	400 L
Cruising range at max speed	130 mile
Cruising range at economical speed 22 knots	250 mile

Length, max (with engine):
8,0 m



Hull length:
7,5 m



Width, max:
2,7 m



Hull draught, max:
0,6 m



Diesel engine power:
290 h.p.



Speed, max:
40-43 knot





FLOATING DOCKS

FLOATING DOCKS WITH LOAD-CARRYING CAPACITY OF 400 TO 30 000 T



There are the marine constructions designed for shipbuilding and ship repair in sea (ocean) and harbor conditions.

Dock types: metal and composite. A hallmark of composite docks is that their pontoon parts are made of reinforced concrete and wing-walls are metallic, which is dictated by the maximum optimality of this very construction. The use of unique non-caisson technology of the longitudinal and transversal jointing afloat of the separate parts of reinforced concrete pontoons gives the possibility to construct the docks of unlimited dimensions.

Mechanical, electromechanical and painting shops are placed in metal towers which permit to carry out the ships and vessels repair in autonomous mode.

The floating docks are characterized by high safety factors and be towed to any part of the world by sea.



**Main Specifications:**

Class:	Dimensions:	Systems and Equipment:
FLOATING DOCK 400 T Lifting Capacity is intended for all kinds of repairs of vessels and floating craft		
K*III Floating Dock, non-self-propelled, non-self-contained regarding power supply, steel	<ul style="list-style-type: none"> Length with overall: 36,7 m (together with the crinolines) Length of pontoon: 29,7 m Height of pontoon: 1,7 m Height from BP to Top Deck: 7,4 m Breadth between outer sides: 16,0 m Breadth between the sidewalls: 12,0 m Operation depth of pontoon deck: 6,1 m 	<ul style="list-style-type: none"> shore power supply system, AC, U=380V, frequency 50 Hz two (2) ballast electric pumps, Q=200 m³/h, H=0,2 MPa, (20 m of water column) one (1) fire-fighting electric pump Q=25 m³/h, P=0,65 MPa (6,5 kgf/cm²), shore water supply four (4) capstans Ш2, traction force 1,5 t
FLOATING DOCK 4,500 T Lifting Capacity is intended for all kinds of repairs of vessels and floating craft		
K*III Floating Dock, non-self-propelled, non-self-contained regarding power supply, composite (reinforced concrete pontoon, steel sidewalls)	<ul style="list-style-type: none"> Length with overall: 118,0 m (together with the crinolines) Length of pontoon: 102,0 m Height of pontoon: 4,8 m Height from BP to Top Deck: 12,5 m Breadth between outer sides: 20,9 m Breadth between the entry fenders: 19,8 m Operation depth of pontoon deck: 7,5 m 	<ul style="list-style-type: none"> one (1) emergency diesel-generator, N=100 kW two (2) high-voltage transformers four (4) electric pumps, Q=2340...1650 m³/h, H=0,04...0,18 MPa (4... 18 m of water column) one (1) fire service electric pump Q=160 m³/h, P=1,0 MPa (10 kg/cm²) one (1) fire service electric pump Q= 72 m³/h, P=1,0 MPa (10 kg/cm²) six (6) capstans LLI6, traction force 80 kN (8 t).
FLOATING DOCK 8,500 T Lifting Capacity is intended for all kinds of repairs of vessels and floating craft		
K*III Floating Dock, non-self-propelled, non-self-contained regarding power supply, composite (reinforced concrete pontoon, steel sidewalls)	<ul style="list-style-type: none"> Length with overall: 155,0 m (together with the crinolines) Length of pontoon: 139,5 m Height of pontoon: 4,8 m Height from BP to Top Deck: 12,8 m Breadth between outer sides: 32,4 m Breadth between the entry fenders: 24,5 m Operation depth of pontoon deck: 7,0 m 	<ul style="list-style-type: none"> one (1) emergency diesel-generator, N=100 kW two (2) high-voltage transformers four (4) electric pumps, Q=2340...1650 m³/h, H=0,04...0,18 MPa (4... 18 m of water column) one (1) fire service electric pump Q=160 m³/h, P=1,0 MPa (10 kg/cm²) one (1) fire service electric pump Q= 72 m³/h, P=1,0 MPa (10 kg/cm²) six (6) capstans LLI6, traction force 80 kN (8 t).
FLOATING DOCK 16,500 T Lifting Capacity is intended for all kinds of repairs of vessels and floating craft		
K*III Floating Dock, non-self-propelled, non-self-contained regarding power supply, composite (reinforced concrete pontoon, steel sidewalls)	<ul style="list-style-type: none"> Length with overall: 164,0 m (together with the crinolines) Length of pontoon: 144,0 m Height of pontoon: 7,0 m Height from BP to Top Deck: 20,0 m Breadth between outer sides: 44,0 m Breadth between the entry fenders: 35,8 m Operation depth of pontoon deck: 9,5 m 	<ul style="list-style-type: none"> two (2) high-voltage transformers, U/U1=6,3/0,4kV; N=1000 kW one (1) auxiliary diesel generator, N=50 kW 4 ballast electric pumps, Q=2340...1650 m³/h, H=0,04...0,18 MPa (4... 18 m of water column) two (2) fire fighting electric pumps Q=160 m³/h, P=1,0 MPa (10 kgf/cm²) one (1) fire fighting electric pump Q= 40 m³/h, P=0,65 MPa (6,5 kgf/cm²) two (2) dock portal cranes with lifting capacity 5...3,2 t at outreach of 15...23 m (according to separate contract) six (6) capstans Ш6, traction force 80 kN (8 t).
FLOATING DOCK 25,000 T Lifting Capacity is intended for all kinds of repairs of vessels and floating craft		
K*III Floating Dock, non-self-propelled, non-self-contained regarding power supply, composite (reinforced concrete pontoon, steel sidewalls)	<ul style="list-style-type: none"> Length with overall: 207,0 m (together with the crinolines) Length of pontoon: 177,0 m Height of pontoon: 7,05 m Height from BP to Top Deck: 18,75 m Breadth between outer sides: 50,0 m Breadth between sidewalls: 38,85 m Operation depth of pontoon deck: 10,0 m 	<ul style="list-style-type: none"> one (1) high-voltage transformer, U/U1=6,3/0,4 kV; N=1000 kW two (2) diesel generators, N=1000 kW one (1) auxiliary diesel generator, N=50 kW twelve (12) ballast electric pumps, Q=2340...1650 m³/h, H=0,04...0,18 MPa (4... 18 m of water column) two (2) fire fighting electric pumps Q=160 m³/h, P=1,0 MPa (10 kgf/cm²) one (1) electric pump Q= 40 m³/h, P=0,65 MPa (6,5 kgf/cm²) two dock portal cranes with lifting capacity 10...20 t according to separate contract six (6) capstans Ш6, traction force 80 kN (8 t).



"HETMAN SAH" /

FRIGATE

Designed for long patrols to search and destroy enemy submarines, as well as for protection of escorted warships and vessels.



Length, overall:
123,00 m



Length on design WL:
113,00 m



Beam, overall:
14,20 m



Draught on design WL:
4,20 m



Depth to upper deck:
9,56 m



Displacement, full load:
3750 t



Max speed:
30-31 kts



Main Specifications:

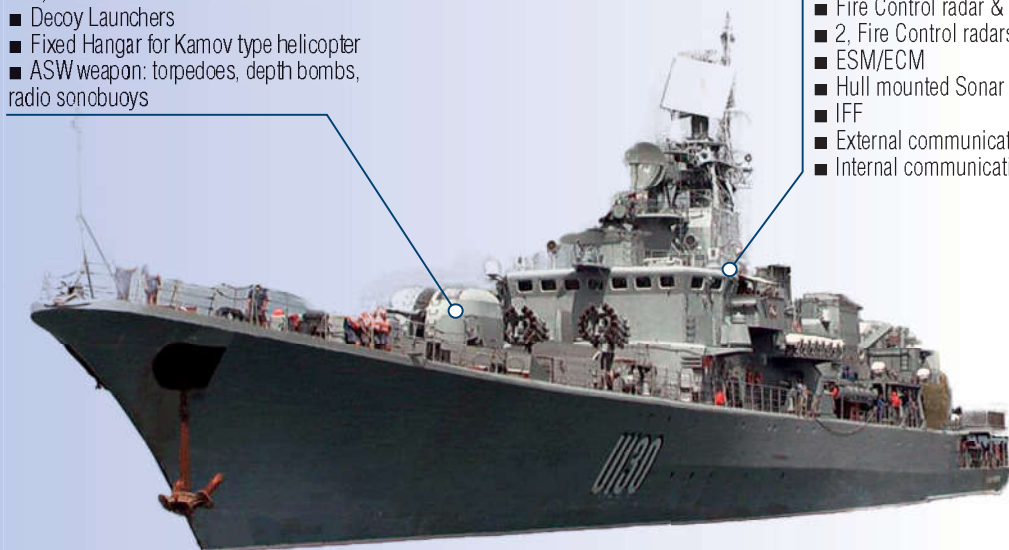
Propulsion/Speed:	
■ Main power plant	COGAG
■ Range	3900 NM at 14 kts
■ Endurance	30 days

Weapons:

- 1-100 mm Gun
- SAM OSA-MA2 (SA-N-4 mod.)
- 2, CIWS AK 630M (2x6-30 mm)
- 2x4 Torpedo Launchers ChTA-53
- 2, RBU-6000 ASW rocket launchers
- Decoy Launchers
- Fixed Hangar for Kamov type helicopter
- ASW weapon: torpedoes, depth bombs, radio sonobuoys

Sensors and communication:

- Data highway/Distributed processors
- Data Link System
- 3-D Long Range Air/Surface Surveillance radar
- 2, Navigation radars
- Surface Surveillance radar
- Fire Control radar & tracker for SAM
- 2, Fire Control radars & EO trackers for Gun&CIWS
- ESM/ECM
- Hull mounted Sonar & VDS
- IFF
- External communication system
- Internal communication system





"BAR'ER-VK"

NAVAL MISSILE GUIDED WEAPON SYSTEM

"Bar'er-VK" Naval Missile Guided Weapon System is designed to destroy ships as well as coastal moving and stationary modern armoured targets, light-armoured objects, coastal fortified firing positions and helicopters with missiles RK-2V.



Maximum firing range:
not less than 7000 m



High time to maximum range:
62,00 m



Weight system:
1100 kg



Weight missile in container:
47,2 kg



Target detection range at day time:
10 km



Target detection range at night time:
7 km



Operating temperature range:
from -40 to +60 °C



Main Specifications:

Missile control system	by laser beam with target tracking in automatic mode
Warhead:	
■ tandem shaped charge with armour penetration behind explosive reactive armour	not less than 800 mm
■ high-explosive fragmentation with number of fragments of 2-3 g weight	up to 900 pcs
Weight:	
■ system	1100 kg
■ missile in container	47,2 kg
Overall dimensions:	
■ launching unit with two missiles RK-2V	2412x1334x1876 mm
■ missile caliber	130 mm
■ container diameter	180 mm
■ container length	1917 mm



"ARBALET-K"

NAVAL SHORT RANGE AIR DEFENSE SYSTEM

«Arbalet-K» naval short range air-defense missile system is designed to destroy jet, propjet and propeller-driven aircrafts and helicopters at head-on and pursuit courses, under conditions of a target direct visibility using surface-to-air missile of «Iglu» type.

Main Specifications:

Maximum altitude of targets destruction:	
■ jet aircrafts at head-on courses	2000 m
■ jet aircrafts at pursuit courses	2500 m
■ helicopters and propjet aircrafts at head-on courses	3000 m
■ helicopters and propjet aircrafts at pursuit courses	3500 m
Minimum altitude of targets destruction	10 m
Velocity of engaging targets:	
■ at head-on courses	360 m/s
■ at pursuit courses	320 m/s
Rotation angles of traverse platform	
■ heading angle	from -150° to +150°
■ angle of elevation	from -25° to +60°
■ angle of roll	±25°

Target destruction range:
500 - 5000 m



Weight system:
1020 kg



Overall dimensions:
1700x1856x1876



Target detection range at day time:
10 km



Target detection range at night time:
7 km



Operating temperature range:
from -40 to +60 °C





BM.5-1 "KATRAN-M1"

REMOTE WEAPON STATION (RWS)

Enhanced fire power RWS is designed to be mounted on boats and ships, and to hit surface and low-flying targets. It is controlled by special centralized fire-control system from both turret and remote-control console.



Full combat weight:
1,7+2% t



Length (with cannon):
3,750 mm



Width:
2,000 mm



Height (without half-platform):
780 mm



Fire control system:
Joint, centralized

Armament:

Cannon:	
■ type	ZTM-1, automatic
■ caliber	30 mm
■ rate of fire	400 rounds/min.
■ effective range of fire at surface targets	4,000 m
■ effective range of fire at air targets	2,500 m
Machine gun:	
■ type	PKT
■ caliber	7,62 mm
Antitank guided missile system:	
■ type	Complex 212
■ missile type	RK-2S
■ effective range of fire	5,000 m



"SARMAT"

REMOTE WEAPON STATION (RWS)

The SARMAT System is designed to be mounted at wide range of combat vehicles, light ships and coast guard boats.

It is used to hit static and moving modern armoured targets that have combined, spaced or monolithic armour, including explosive reactive armour, small-size targets like permanent fire positions, tank in a trench, light-armoured objects, hovered helicopters, surface targets and enemy manpower at any time of day.

The SARMAT system comprises:

Combat Module consisting of:

- Rotating Platform with Launching Rails for Missiles
- Power Unit
- Guidance Device
- Thermal Imager, at Customer's request
- Guided Missiles in Transport and Launching Containers
- Machine Gun
- Remote Control Panel

Full combat weight:
410 kg



Overall Dimensions with Armaments:
2120x1300x610



Readiness Time:
20 s



Operating Temperature Range:
from -40 up to +60 °C

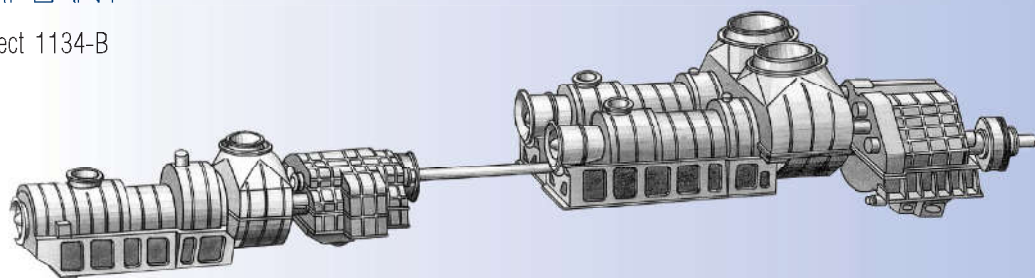




M5N

MARINE POWERPLANT

Designed for ships of project 1134-B (Berkut-B).



Displacement:
9,500 t



Speed:
32,5 knot



Power:
92,000 h.p.

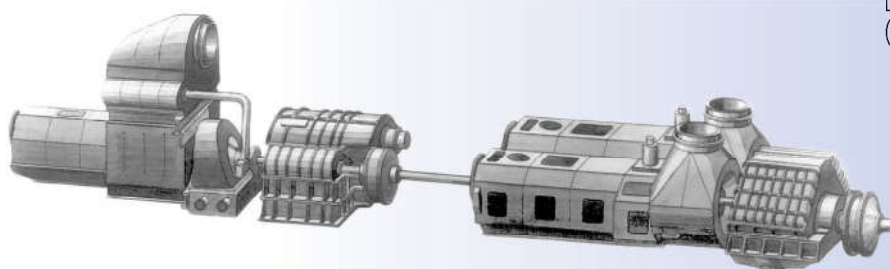
Main Specifications:

Engines:	
■ UGT16000	4 unit
■ UGT6000	2 unit
Reducers:	
■ RG54	2 unit
■ R063	2 unit

M21

MARINE POWERPLANT

Designed for ships of project 1164 (Atlant)



Main Specifications:

Engines:	
■ UGT16000	4 unit
■ UGT6000	2 unit
Reducers:	
■ RG54	2 unit
■ R028	2 unit

Displacement:
11,500 t



Speed:
32,5 knot



Power:
110,000 h.p.





M25 MARINE POWERPLANT

Designed for ships of project 1609 (Atlantika / Roy Vit).



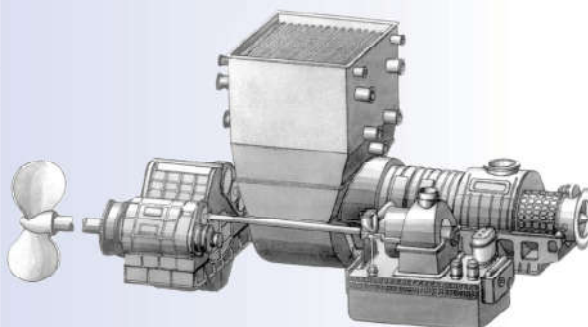
Displacement:
35,000 t



Speed:
25 knot

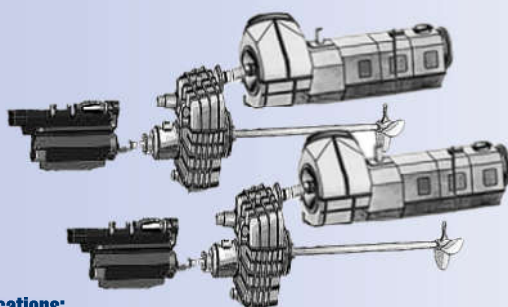


Power:
50,000 h.p.



Main Specifications:

Engines:	
■ UGT16000	2 unit
Steam turbine:	2 unit
Reducers:	
■ P025	2 unit



Main Specifications:

Engines:	
■ UGT15000+	2 unit
Diesel:	2 unit
Reducers:	
■ P055	2 unit

MARINE POWERPLANT M55R

Designed for ships of project 22350 (Admiral Gorshkov).

Displacement:
4,500 t



Speed:
29 knot



Power:
65,000 h.p.



M73 MARINE POWERPLANT

Designed for amphibious assault air-cushion ships "ACV-1".



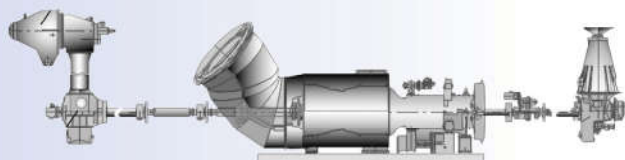
Displacement:
175 t



Speed:
over 50 knot



Power:
24,000 h.p.



Main Specifications:

Engines:	
■ UGT6000+	2 unit
Reducers:	
■ RS73-10	2 unit
■ RS73-20	2 unit
■ RS73-30	2 unit

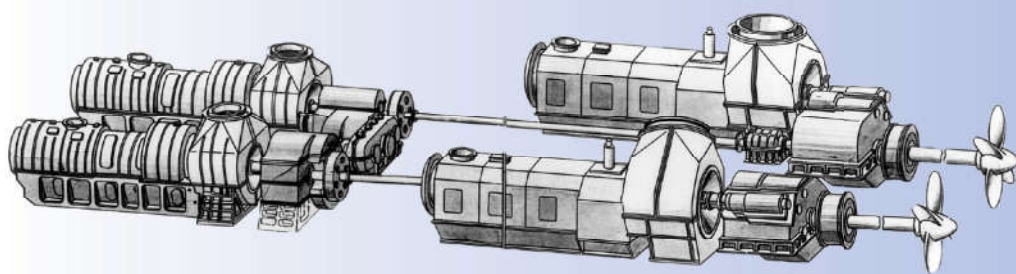




M9B

MARINE POWERPLANT

Designed for ships of project 1155 (Frigate).



Displacement:
8,500 t



Speed:
29 knot



Power:
74,000 h.p.

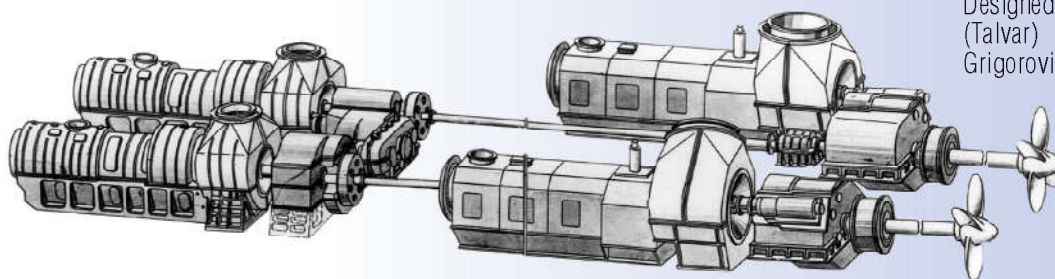
Main Specifications:

Engines:	
■ UGT15000	2 unit
■ UGT16000	2 unit
Reducers:	
■ R058	2 unit
■ RA28	2 unit
■ R1A63 (with power transfer to other board)	1 unit

M7N1

MARINE POWERPLANT

Designed for ships of projects 1135.6 (Talvar) and 11356M (Admiral Grigorovich).



Main Specifications:

Engines:	
■ UGT15000	2 unit
■ UGT16000	2 unit
Reducers:	
■ R058	2 unit
■ R063	1 unit
■ R1063 (with power transfer to other board)	1 unit

Displacement:
3,500 t



Speed:
30 knot



Power:
58,000 h.p.





M44 MARINE POWERPLANT

Designed for ships of project 11661 (Gepard).



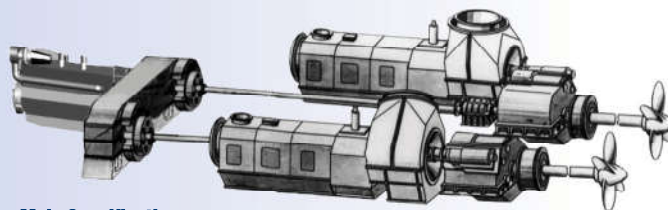
Displacement:
1,500 t



Speed:
32,5 knot

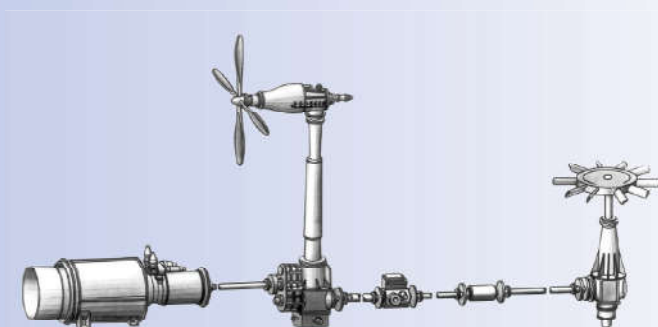


Power:
33,000 h.p.



Main Specifications:

Engines:	
■ UGT15000	2 unit
Diesel:	1 unit
Reducers:	
■ RA28	2 unit
■ R044	1 unit



MARINE POWERPLANT MT70

Designed for ships of project 12061 (Murena).

Main Specifications:

Engines:	
■ UGT6000	2 unit
Reducers:	
R071	2 unit
■ RS73-20	2 unit
■ RS73-30	2 unit

Displacement:
130 t

Speed:
60 knot

Power:
20,000 h.p.

GODAG PLANT COMBINED DIESEL AND GAS (CODAG) POWERPLANT

Designed for ships of project 052V, 052S.



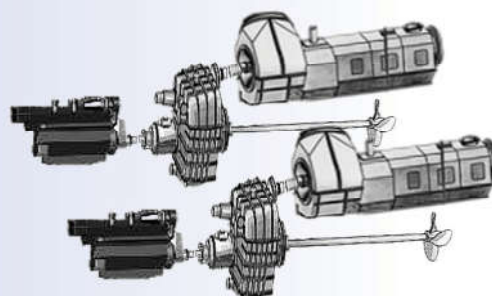
Displacement:
7,000 t



Speed:
30 knot



Power:
92,000 h.p.



Main Specifications:

Engines:	
■ UGT25000	2 unit
Diesel:	2 unit





M36

MARINE POWERPLANT

Designed for ships of project 15 (Delhi).



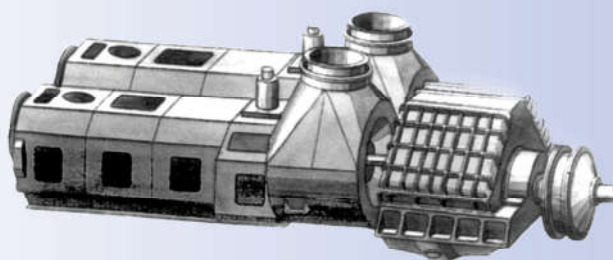
Displacement:
8,000 t



Speed:
34 knot



Power:
88,000 h.p.



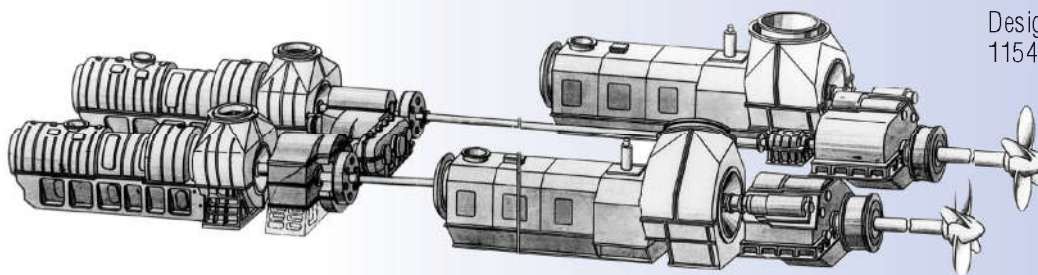
Main Specifications:

Engines:	
■ UGT16000	4 unit
■ Diesel	2 unit
Reducers:	
■ RG54	2 unit

M27

MARINE POWERPLANT

Designed for ships of project 1154 (Yastreb).



Main Specifications:

Engines:	
■ UGT15000	2 unit
■ UGT6000	2 unit
Reducers:	
■ R058	2 unit
■ R063	1 unit
■ R1063 (with power transfer to other board)	1 unit

Displacement:
3,700 t

Speed:
30 knot

Power:
54,000 h.p.

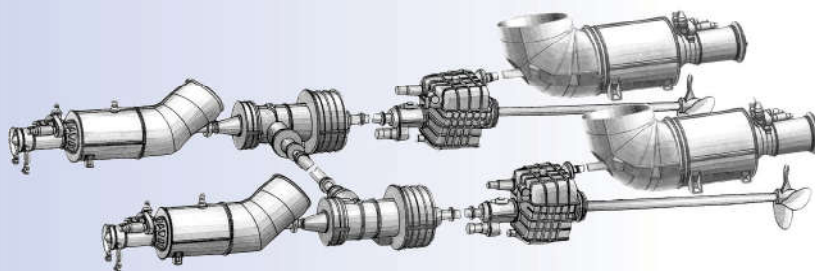




M15-V

MARINE POWERPLANT

Designed for ships of project 1241 (Molniya).



Displacement:
500 t



Speed:
43 knot



Power:
32,000 h.p.

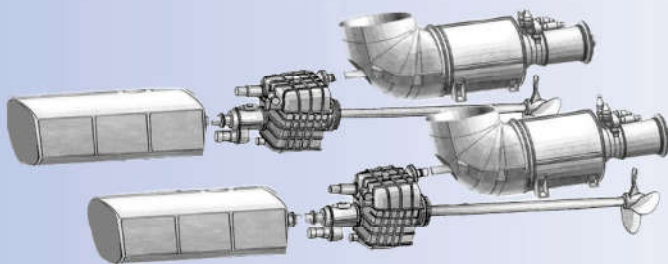
Main Specifications:

Engines:	
■ UGT3000	2 unit
■ UGT6000	2 unit
Reducers:	
■ R076 (with power transfer to other board)	2 unit
■ R077	2 unit

M15-A

MARINE POWERPLANT

Designed for ships of project 1241 (Molniya).



Main Specifications:

Engines:	
■ UGT6000+	2 unit
■ Diesel	2 unit
Reducers:	
■ R077	2 unit
Hydro-mechanical gearbox GMP	2 unit

Displacement:

470 t



Speed:

41 knot



Power:

30,000 h.p.





M35

MARINE POWERPLANT

This propulsion system is designed for small amphibious assault hovercrafts of project 12322 (Zubr).



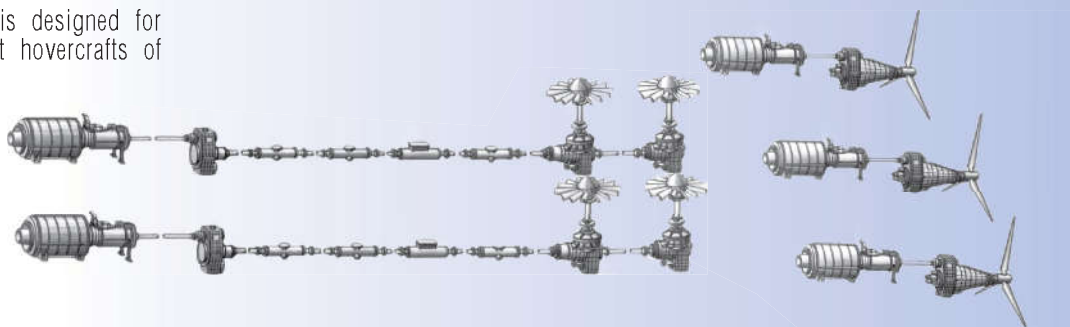
Displacement:
550 t



Speed:
63 knot

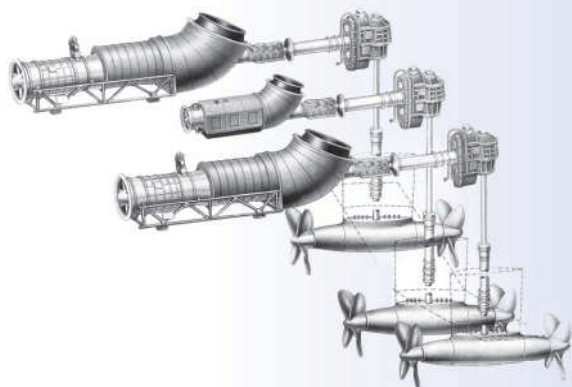


Power:
50,000 h.p.



Main Specifications:

Engines:	
■ UGT6000	5 unit
Reducers:	
■ R035-10	3 unit
■ R035-20	2 unit
■ R035-22	2 unit



Main Specifications:

Engines:	
■ UGT6000	1 unit
■ UGT16000	2 unit
Reducers:	
■ RD50	3 unit
■ R1D50	3 unit

M10/M16

MARINE POWERPLANT

Designed for corvettes ASW of project 11451 (Sokol).

Displacement: 510 t

Speed: 60 knot

Power: 48,000 h.p.



UGT 3000R

GAS-TURBINE ENGINE

Engine is designed for marine propulsion systems of displacement-type ships.



Efficiency:
29,0%



Power turbine rotary speed:
8,800 rot/min



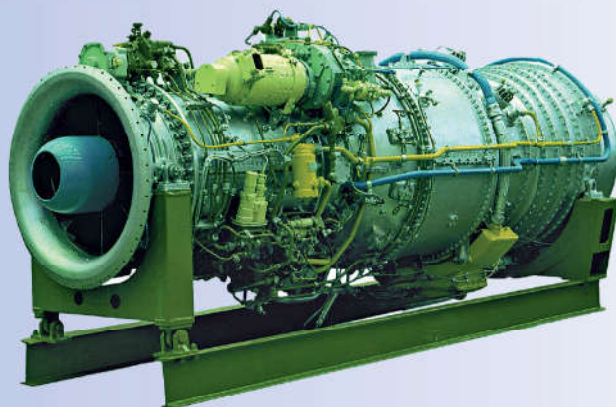
Power:
3,360 kW



Main Specifications:

UGT 3000R (DS76) according to ISO 2314

Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,291 kg/(kW h)
Exhaust gas mass flow	16,0 kg/s
Exhaust gas temperature	470 °C



Main Specifications:

UGT 6000 (DP71, DM71) according to ISO 2314

Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,263 kg/(kW h)
Exhaust gas mass flow	32,0 kg/s
Exhaust gas temperature	440 °C

UGT 6000 (DS71) according to ISO 2314

Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,281 kg/(kW h)
Exhaust gas mass flow	32,5 kg/s
Exhaust gas temperature	470 °C

UGT 6000

GAS-TURBINE ENGINE (DP71, DM71)

Engine is designed for marine propulsion systems of displacement-type and dynamically-supported ships.

DP71, DM71

Efficiency:
32,0%

Power turbine rotary speed:
7,000 rot/min

Power:
7,350 kW



DS71

Efficiency:
30,0%

Power turbine rotary speed:
4,750 rot/min

Power:
7,350 kW



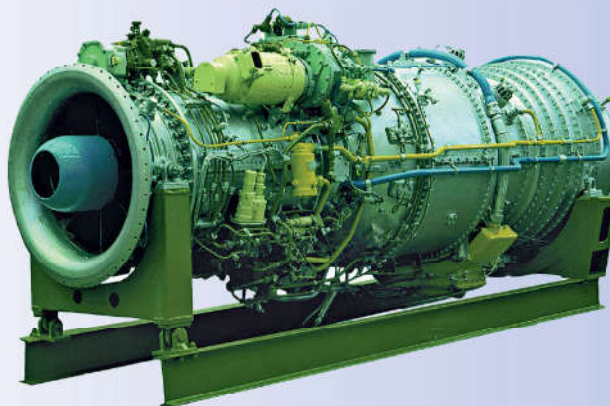


UGT 6000+

GAS-TURBINE ENGINE

Engine is designed for marine propulsion systems of displacement-type and dynamically-supported ships.

UGT 6000+	UGT 6000R+
Efficiency: 33,0%	Efficiency: 31,0%
Power turbine rotary speed: 7,000 rot/min	Power turbine rotary speed: 7,300 rot/min
Power: 8,800 kW	Power: 8,800 kW



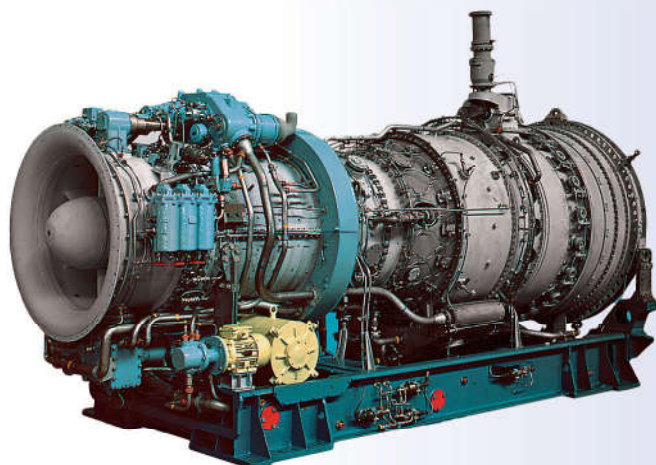
Main Specifications:

UGT 6000+ (DP79) according to ISO 2314

Specific liquid fuel consumption ($H_u=10200$ kcal/kg)	0,255 kg/(kW h)
Exhaust gas mass flow	34,0 kg/s
Exhaust gas temperature	470 °C

UGT 6000R+ (DS77) according to ISO 2314

Specific liquid fuel consumption ($H_u=10200$ kcal/kg)	0,272 kg/(kW h)
Exhaust gas mass flow	34,5 kg/s
Exhaust gas temperature	500 °C



Main Specifications:

UGT15000 (DA90) according to ISO 2314

Specific liquid fuel consumption ($H_u=10200$ kcal/kg)	0,238 kg/(kW h)
Exhaust gas mass flow	73,0 kg/s
Exhaust gas temperature	430 °C

UGT 6000R+ (DS77) according to ISO 2314

Specific liquid fuel consumption ($H_u=10200$ kcal/kg)	0,263 kg/(kW h)
Exhaust gas mass flow	70,0 kg/s
Exhaust gas temperature	430 °C

UGT 15000

GAS-TURBINE ENGINE (DA90)

Engine is designed for marine propulsion systems of displacement-type ships.

UGT15000	UGT15000R
Efficiency: 35,4%	Efficiency: 32,0%
Power turbine rotary speed: 5,300 rot/min	Power turbine rotary speed: 4,400 rot/min
Power: 17,650 kW	Power: 14,700 kW



UGT 15000+

GAS-TURBINE ENGINE

Engine is designed for marine propulsion systems of displacement-type ships.



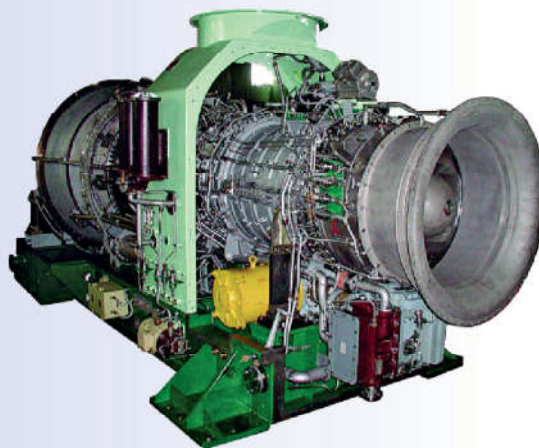
Efficiency:
36,0%



Power turbine rotary speed:
3,500 rot/min



Power:
20,000 kW



Main Specifications:

UGT 15000+ (DA91) according to ISO 2314	
Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,234 kg/(kW h)
Exhaust gas mass flow	76,5 kg/s
Exhaust gas temperature	450 °C

UGT 16000R

GAS-TURBINE ENGINE (DP71, DM71)

Engine is designed for marine propulsion systems of displacement-type and dynamically-supported ships.



Main Specifications:

UGT 16000R (DT59) according to ISO 2314	
Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,281 kg/(kW h)
Exhaust gas mass flow	100,0 kg/s
Exhaust gas temperature	380 °C

Efficiency:
30,0%



Power turbine rotary speed:
3,600 rot/min



Power:
16,550 kW





UGT 25000

GAS-TURBINE ENGINE (DA80)

Engine is designed for marine propulsion systems of displacement-type ships.



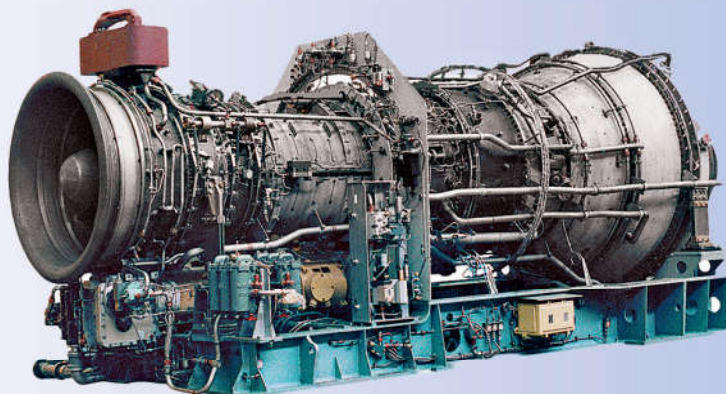
Efficiency:
37,0%



Power turbine rotary speed:
3,400 rot/min



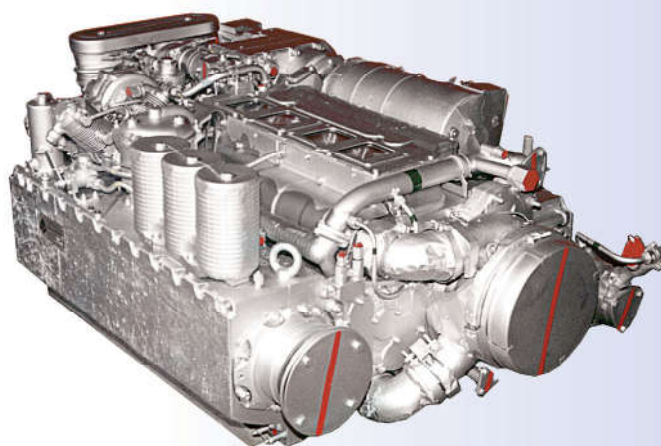
Power:
28,700 kW



Main Specifications:

UGT 25000 (DA80) according to ISO 2314

Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,228 kg/(kW h)
Exhaust gas mass flow	94,0 kg/s
Exhaust gas temperature	500 °C



457KM

DIESEL ENGINE

For civilian purposes, used as the main propulsion system installed on fast small-size vessels (Kalkan-R).

Main Specifications:

Max engine output operating with diesel fuel	368 (500) kW (h.p.)
Crankshaft rotation speed at max power output	2,200 min ⁻¹
Specific fuel consumption	167 g/e.h.p.-hr
Cylinder diameter rated	120 mm
Piston stroke rated	2x120 mm
Diesel displacement volume rated	13,6 l

Length:
1,413 mm



Width:
955 mm



Height:
581 mm



Engine dry weight:
1,050 kg





NAVAL AUTOMATED TACTICAL DATA SYSTEM

It is designed for automation of combat use of weapons and radio-electronic means of the ship (Naval Task Force), commanding officers providing with tactical environment data.

**Main Specifications:**

Number of simultaneously processed targets (flags)	Up to 600
Platform number	Up to 10
Combat information field	1000, in height – up 30 Km
Maximum duration of task solving concerning target distribution (since information identification up to making target designation)	Not more than 0,8 Sec
Target types	aerial, surface underwater
Speed rang of aerial targets	Up to 1000 m/sec
Number of operator console	Up to 30
Servers number	Up to 8
Exchange of information by the network Ethernet 1000Base-SX	
Technology of exchange – Data Distribution Service	

MULTIBEAM ACTIVE ARRAY SURVEILLANCE RADAR STATION

Radar Station is designed for automatic search and detection, tracking of surface and air targets and target acquisition.

Main Specifications:

Frequency band	C-band (NATO G-band)
Extended Long Range mode	Up to 200 km
Elevation coverage	0 – 70 Degree
Number of simultaneously tracked targets	More than 100 Unit
Multibeam antenna phased array with digital diagram formation	





“SENS-2”

OPTICAL ELECTRONIC SYSTEM OF GUN MOUNT FIRE CONTROL

It is designed for surface picture monitoring, target detection and fire control.



Measured range:
from 100 to 7000 m



Maximum speed of tracked targets at zero parameter:
Aerial: 0-700 m/sec



Maximum speed of tracked targets at zero parameter:
Marine: 0-60 units



Main Specifications:

Working sectors of optical electronic devices (OED):	
■ course angle	From -175° to +175°
■ Elevation angle	From -25° to +85°
Speed of retargeting of OED:	
■ course angle	Not less than 70 degree/sec
■ Elevation angle	Not less than 50 degree/sec
Viewing field of optical electronic sensors of OED:	
TV camera (smoothly varies in the range):	
■ Horizontally	from 1,5° to 28°
■ Vertically	from 1° to 21°
Thermal camera (smoothly varies in the range):	
■ Horizontally	5,5°
■ Vertically	4,1°



“SAGA”

OPTICAL ELECTRONIC SYSTEM OF THE PROVISION OF HELICOPTER TAKE-OFF, HOMING AND SHIP LANDING

It is designed for helicopter take-off, in-flight safety, homing into landing zone (on ship board), and also for provision of objective control and analysis of flight information.

Main Specifications:

The range of radio communications 'helicopter-ship-helicopter' (within direct visibility)	Up to 75 km
MW omnirange:	
angular sector work:	
■ azimuth	360°
■ angle of elevation	From -15° up to +30°
■ output power	Up to 200 W
■ frequency range	265...525 kHz
Power supply of the system is provided by ship single-phase network of 50 Hz, 220V, and DC 27V	

Energy consumption:
Not more than 1,5 kW



Weight of system:
Not more than 230 kg



Helicopter segment weight:
Not more than 7 kg





“SARMAT”

MARINE OPTOELECTRONIC FIRE CONTROL SYSTEM OF SMALL AND MIDDLE ARTILLERY CALIBER

Designed for fire control of small and medium artillery caliber against aerial, surface and coastal targets



Weight without SPTA:

416 kg



Including Weight of optoelectronic direction unit:

217 kg



Power consumption:

2 kW



Main Specifications:

Mean square error of total training and elevation gun angle	Not more than 1,5-2,0
Mean square error of total of determining the coordinates of tracked targets:	
■ angular coordinates	Not more than 0,2 millirad
■ distance	Not more than 5 m
Operating sectors of carrier-based coordinate system:	
■ By angle on the bow	±175
■ elevation	From -20° up to +85°
■ Operating time of the system (from catching autotracking till the readiness to firing start)	Not more than 3 sec
Швидкість перенацілення:	
■ By angle on the bow	70 degree/sec
■ elevation	50 degree/sec
The field of optoelectronic sensors:	
■ TV camera	narrow field of view 1°27 horizontally 1°5 vertically; wide field of view 28°31 horizontally 21°23 vertically
■ Thermal camera	narrow field of view 2,5° horizontally 1,67° vertically; wide field of view 12° horizontally 8° vertically
Detection range of air target under the meteorological visibility range of 25 km:	
■ TV channel	Not less than 12 km
■ thermal channel	Not less than 10 km

SONAR STATION MG – 361 (“CENTAUR”)

MG-361 Sonar Station is a digital sonar station with towed flexible extended antenna for surface vessels.

The station is designed for the detection and classification of underwater and surface objects by their noise emission in the low and the sound frequency range, tracking and determining of the submarines coordinates, providing data for the weapons control system for targeting.

Main Specifications:

Submarine detection range	30-70 km
Torpedoes detection range	at least 30 km
The signal analysis band	0,3-3,8 Hz
Surveillance Sector	360°
Antenna's towing depth	50-200 m
Towing speed	2-8 knots Max - 13 knots





“TRONKA-MK” HYDROACOUSTIC STATION FOR SEARCHING OF SABOTEUR UNDERWATER SWIMMERS

Hydroacoustic station is designed for searching and detection of saboteur underwater swimmers and provides protection of:

- ships of different purpose on moorage at the high sea, in the road, in stationing site;
- hydrotechnical objects in ports, harbors;
- object of oil-producing industry located in sea basins



Detection range of saboteur underwater swimmers in flippers:
up to 800 m



Antenna immersion depth:
up to 50 m

Main Specifications:

Detection range with delivery vehicles	up to 1000 m
Range accuracy	1,0%
Azimuth accuracy	0,8°
Angular field of horizontal view	30, 360°
Angular field of vertical view	18°
Automatic target tracking	up to 20

FOR SHIPS OF «CORVETTE-FRIGATE» CLASS:
HAS MGK-345 «BRONZA», «BOSFOR», HAS MGK-365

HYDROACOUSTIC STATION



Hydroacoustic stations are designed for detection, position and parameters determination of underwater movable objects, including different small-size objects.

Hydroacoustic station main functions:

- searching and detection of underwater objects;
- measuring of bearing, range and radial velocity of up to 8 movable objects;
- control of the own-ship's noise;
- Hydroacoustic station operators training.

Coverage range: 
up to 40 km

Power: 
20 kW

SONAR SYSTEM MGK-369 (“ZVEZDA/STAR M1-01”)

MGC-369 is a modification of the MGK-365 with the dipping antenna (DA) for surface vessels with dynamical support - hydrofoil ships or hovercrafts.

The system is designed to be operated on ship's foot, for detection, tracking and determining of submarines coordinates, coordinates providing for the ship fire control systems of anti-submarine weapon, sonar communication and identification.

Main Specifications:

Submarines detection range in active mode: When working on the foot	40-45 km
The coordinates determining accuracy of detected objects:	
At a distance	1% of the scale nominal
In bearing	1,7°
The target detection probability	0.9
The number of simultaneously tracked targets	10
The horizontal surveillance	360°
Antenna immersion depth (towing)	up to 200 m
Sonar System carrier - hydrofoil ship of 11451project	

**“CATRAN”** HYDROACOUSTIC STATION FOR SEARCHING OF SEA MINES AND SMALL UNDERWATER OBJECTS

Designed for searching, detecting, classifying, position determination of underwater objects such as sea mines and provides the following:

- protection of ships of different purposes;
- searching for sunk objects.

Detection of lying on bottom, silted, drifting, anchored and mobile objects, Sound speed measurement at depth and range forecast, Data indication on the monitor at panorama kind, Localization and display of detected objects, Data documenting, Automatic control of sonar complex operation.



Effective radius of detected objects:
0,3 m



Array dipping depth:
up to 200 m



Towing speed:
up to 8 KN

Main Specifications:

Range of underwater	up to 2 km
Range accuracy	1 %
Azimuth accuracy	2°
Horizontal covering sector	360°
Service life	10 years

SELF-CONTAINED ANCHOR
HYDROACOUSTIC STATION (AS)**HYDROACOUSTIC STATION****Main Specifications:**

Signals detection from underwater objects more than 1000 tonnes of water tonnage moving at 2 m/s speed	Up to 4 km and more
Detection, registration and finding of direction on the source of seismic waves emission	Up to 100 Hz

Designed to:

- detect the moving underwater objects and find direction;
- detect, register and determine the direction on the sources of seismic waves emission due to earthquakes, underwater volcanic eruptions in seismically unsafe coastal marine areas.

Setting depth:
max 200 m



Total weight:
max 500 kg

**SONAR SYSTEM “ZVEZDA/STAR-2”**

The system is designed for detection, tracking and determining of submarines coordinates, coordinates providing for the Data Collection and Processing System (DCPS) and fire control systems of anti-submarine weapon (ASW FCS), for target classification; detection of torpedoes and sonar signals, hydroacoustic communication and identification.

The energy potential of the complex provides the submarine active location with access to the 2nd distant zone of the acoustic lighting.

Main Specifications:

Submarines detection range in active operation mode:	
■ On the bottom antenna (BA)	60 km
■ On the towed antenna (TA)	120 km
The coordinates determining accuracy of detected objects:	
At a distance	1 % of the scale nominal
In bearing	1.5°
The target detection probability	0.9
The number of simultaneously tracked targets	up to 5
The horizontal surveillance:	
By the BA	± 130°
By TA or OA	360°
Antenna immersion depth (towing)	up to 400 m





HYDROACOUSTIC STATION

HYDROACOUSTIC STATION OF UNDERWATER
SEARCHING OF SMALL FAST-MOVING OBJECTS

Designed for search, detection, tracking and providing of targeting data concerning the for the small underwater fast-moving objects, and provides protection for ships of various purposes.



Acquisition range:
Up to 5 km

Main Specifications:

positioning accuracy:	
■ in range	Up to 25°
■ on bearing	Up to 1°
Surveillance sector:	
■ in horizontal direction	360°
■ in vertical direction	20°

HELICOPTER'S SONAR STATION

Sonar station is designed for search and detection of underwater moving objects.

Main Specifications:

Weight of outboard equipment	Up to 100 kg
Weight of on-board equipment	Up to 150 kg

Operating range:
Up to 40 km



Antenna immersion depth:
Up to 150 m



Search sector :
360°



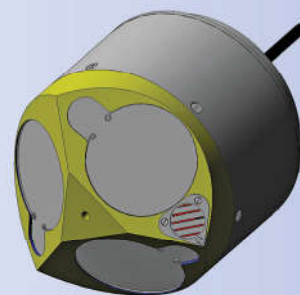
HYDROACOUSTIC DOPPLER LOG "LAG"

Designed to measure:

- The absolute speed of the carrier relatively to the bottom at a depth of 300 meters,
- The relative speed of the carrier at depths greater than 300 meters.

Intended use:

- For underwater and surface vehicles. The measurement data of carrier speed and position (heel, pitch, depth, course) for displaying on a computer monitor and recording is transferring by cable (interface RS232, RS485).



Main Specifications:

Measurement of the absolute speed at the maximum distance: from the antenna to the bottom at least	300 m
Measurement of the relative speed in the absence of the echo from the bottom: The maximum measured speed	10 m/s
Orientation of the speed vector	0 - 360°



CABLE STATIONARY SONAR STATION (KCGAC) WITH AUTOMATED WORKING PLACE (ARM)



Service lifetime:
24 month



Distance to coastal receiving post:
30 km



Weight, (without cable):
40 – 70 kg

Main Specifications:

Object detection range with the level of noise emission 0,05 Pa	4 - 10 km
The average bearing error, not more	5°
Operation frequencies	Infrasonic and bass
Operation depth	40 - 200 m
Automated working place	Detection, bearing, classification, motion path display



Main Specifications:

Carrier transmitter frequency	Up to 173,45 MHz
Overall dimensions	∅ 120 x 1260 mm

AERONAUTICAL SONAR BUOY RSL-16

Passive undirected Sonar buoy with automatic threshold is designed for searching and detecting of underwater moving objects.

Sonar operating range:
2-5000 Hz



Hydroacoustic antenna immersion depth:
Up to 300 m



Weight:
10 ± 0,5 kg



RGB-NM 1 AERONAUTICAL SONAR BUOY

Passive undirected sonar buoy of RGB-NM type with automatic threshold is designed for searching and detecting of underwater moving objects.



Sonar operating range:
infrasonic



Hydroacoustic antenna immersion depth:
25, 75 and 150 m



Weight:
7,5 kg



Main Specifications:

Radio transmitter carrier frequency	to 53,45 MHz
Overall dimensions	∅ 120 x 1000 mm





RGB-26 AERONAUTICAL SONAR BUOY



Overall dimensions, diameter:
150 mm



Overall dimensions, length:
1260 mm



Weight, (without cable):
Not more 15 kg

Main Specifications:

operating principle	Passive directed
sonar data processing	Inside RGB
frequency range	10 -120 Hz / 10- 250 Hz
compass error	$\pm 6^\circ$
Antenna immersion depth	25; 150; 300 m
Transmitter power, not less	1,0 W
responder beacon channel	GPS
number of radiochannels	16
destruction	Self-destruction



Main Specifications:

Emission power	25 W
Operating voltage	600 V
Operating depth	Up to 80 m

HYDROACOUSTIC CONVERTER PZ-270

Designed for hydroacoustic signals emission in liquid environment during laboratory research.

Resonance frequency:
270 Hz



Overall dimensions:
515x67 mm



Weight:
48 kg



PZ-525 POWER LOW-FREQUENCY CONVERTER

Designed for hydroacoustic signals emission in liquid environment during laboratory research.



Resonance frequency:
525 Hz



Overall dimensions:
1250x830x400



Weight:
650 kg



Main Specifications:

Emission power	2000 W
Operating voltage	1000 V
Operating depth	up 200 m



PZTS-900

POWER LOW-FREQUENCY CYLINDRICAL CONVERTER

Destined to emit the hydrosonic signals in liquid during laboratory research.



Resonance frequency:
900 Hz



Overall dimensions:
1200x210x470



Weight:
170 kg



Main Specifications:

Emitted power	1000 W
Operating voltage	1600 V
Operating depth	Up to 100 m



PZTS -1200

POWER LOW-FREQUENCY CYLINDRICAL CONVERTER

Designed to emit the hydrosonic signals in liquid during laboratory and marine research.

Resonance frequency:
1200 Hz



Overall dimensions:
ø700 x 900



Weight:
600 kg



Main Specifications:

Emitted power	9000 W
Operating voltage	1000 V
Operating depth	Up to 300 m





PN-VK GUIDANCE DEVICE

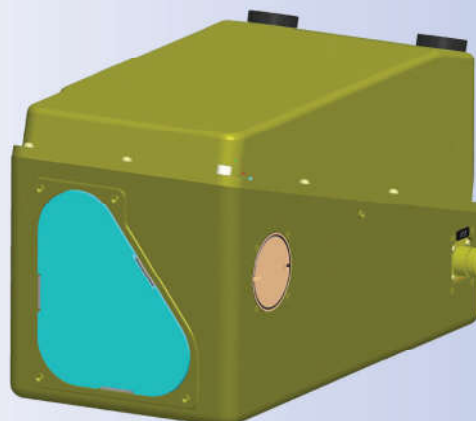
The guidance device for the «Barrier VK» naval guided missile system is designed to search and monitor a target as well as to form the information control field for missile guiding within the structured laser beam using the method of teleorientation.



Overall dimensions:
413x227x224



Weight:
not more than 15,0 kg



Main Specifications:

Distance of detection of a MBT type ground target sized 2,5 m×2,5 m in day conditions under meteorological visibility distance not less than 25 km:

■ under natural illumination of terrain from 100 to 10 ⁴ lx and at contrast of a surveillance object against background not less than 0,5 km	not less than 10 (4) km
■ under natural illumination of terrain not less than 3 lx	not less than 2,5 (1,7) km

LOW-FREQUENCY SONIC MEASURING SYSTEM

Low-frequency sonic measuring system is destined to accomplish the laboratory research of the materials acoustic features in liquid ranged at frequencies range from 200 to 4000 Hz.

PN-AK GUIDANCE UNIT

Designed to create video imagery. The device is a part of the short-range missile system «Arbalet - K».



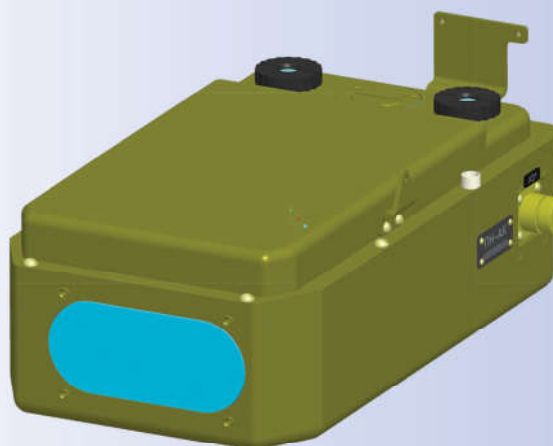
Target detection range:
2,5x2,5 m



Overall dimensions:
359x214x148



Weight:
max. 9,0 kg



Main Specifications:

At daytime with meteorological range of visibility of 25 km:

■ natural illumination from 100 to 10 ⁴ lx and with target contrast as to the background min. 0,5	min. 10 (4) km
■ natural illumination min. 3 lx	min. 2,5 (1,7) km