



UKRINMASH



SHIPBUILDING INDUSTRY



UKROBORONPROM
Ukrainian Defence Industry



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UKRINMASH - 25 YEARS AT THE INTERNATIONAL MARKET

The State Self-Supporting Foreign Trade and Investment Firm «Ukrinmash» which is the participant of the State Concern «UkrOboronProm», operates at the international market since 1991.

The aim of the Firm is to implement the interests of Ukraine in the field of military-technical cooperation with foreign partners. «Ukrinmash» has built reliable business connections with countries from every part of the world. The key mission is service excellence, reliability and customer satisfaction.

«UKRINMASH» OFFERS:

- ▶ Export of weapons and military products in the field of armoured military vehicles, aircraft engineering, shipbuilding industry, radar ammunition and air defence, as well as rocket artillery weapons.
- ▶ Transfer of technologies and know-how, including the development of military factories and MRO centers.
- ▶ Maintenance, repair / overhaul and upgrade of military equipment.
- ▶ Training of foreign military personnel.
- ▶ Import of weapons and military products to Ukrainian Army and all other military and defence structures.
- ▶ R&D, investment and other partnership opportunities.
- ▶ Disposal, demilitarization of the old military equipment and territory demining.
- ▶ Marketing, advertising and intermediary services.



For the last few years Ukrainian Defence Industry has been in the stage of transformation into a highly effective structure. This process is taking place due to new technologies, products, innovations, efficient management and top-professionals who have come into this field. Today we are offering the new armament business culture, customer oriented, flexibility and personal approach.

We represent Ukrainian Enterprises of the State Concern «Ukroboronprom» which employ more than 80 thousand people, and the products of other Ukrainian enterprises. Ukraine is a reliable partner who exports the defence products to many countries of the world. The potential for development of the Ukrainian Military Industrial Sector is a tremendous one who is only at the beginning of its realization and prospects.

We suggest the widest product range in the field of aviation, armour, radio, artillery, as well as ship building and rocket industry, etc.

Ukraine makes part of prestigious club of the countries which has mastered the closed cycle in aircraft building, radio intelligence and radio-electronic warfare, whereas the Ukrainian export potential is among the best 10 in the world.

SE «Ukrinmash» is a unique special exporter and integrator which makes an important part of the Ukrainian Military Industrial Sector honored to be your reliable partner. We are proud that SE «Ukrinmash» is one of the most experienced and one of the biggest export-import companies of Ukraine which has been working in the armament and military hardware market for more than 25 years.

We present you our products range as well as services in repairing, upgrading, joint promotion of the products and cooperation in the military markets. SE «Ukrinmash» is not only reacting to the state of the market but initiates trends in the world market. For nowadays, SE «Ukrinmash» is making a new history of the military industry of Ukraine.



Sergii Sliusarenko
Chief Executive Officer

SE SSFTIF «Ukrinmash»

AMPHIBIOUS ASSAULT HOVERCRAFT

PROJECT 958

It is designed for loading of military equipment and seaborne assault personnel from hard and unprepared beaches, their sea lifting, beach landing and fire support.



MAIN PERFORMANCE DATA

Air cushion overall length	about 57,3 m
Air cushion overall beam	about 25,6 m
Air cushion overall height	about 21,9 m
Full speed at normal displacement of 525,9 t	not less than 60 kn
Complement	27
Full displacement	about 554,4 t
Maximum fuel capacity for 1000 miles transportation	about 150,0 t
Endurance as for the provisions and fresh water for crew	5 days

PATROL WATER-JET BOAT

KALKAN-MP

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 PERFORMANCE DATA

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

MULTIPURPOSE CORVETTE

GAYDUK-M

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



MAIN PERFORMANCE DATA

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

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

ARMORED RIVER GUNBOAT

GYURZA

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



MAIN PERFORMANCE DATA

Length, overall	20,3 m
Beam, overall	4,9 m
Draught, max	0,9 m
Max speed	not less 28 kts
Complement	5
Displacement, full load	38,4 t
Endurance	5 days
Range (at 11 kts)	not less 450 NM
Propulsion	2 diesels

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

FAST PATROL BOAT

PROJECT 58130S

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.



MAIN PERFORMANCE DATA

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

PATROL WATER-JET BOAT

CORAL

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 borders, as well as to take a part at the search and rescue operations.

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)



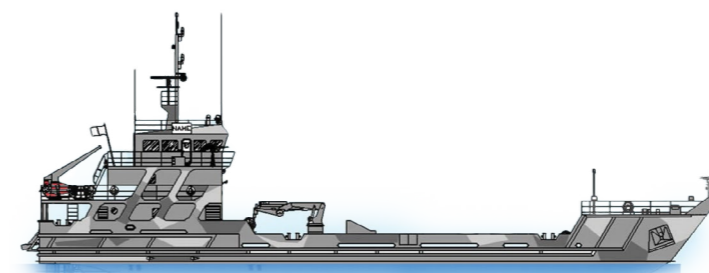
MAIN PERFORMANCE DATA

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

LANDING CRAFT/MILITARY TRANSPORT

BOBR

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



MAIN PERFORMANCE DATA

Length, overall	53,00 m
Beam, overall	10,00 m
Draught, max	1,90 m
Displacement, full load	about 700 t
Complement	12
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:

- 2 Navigation radar
- FLIR system
- Integrated bridge system

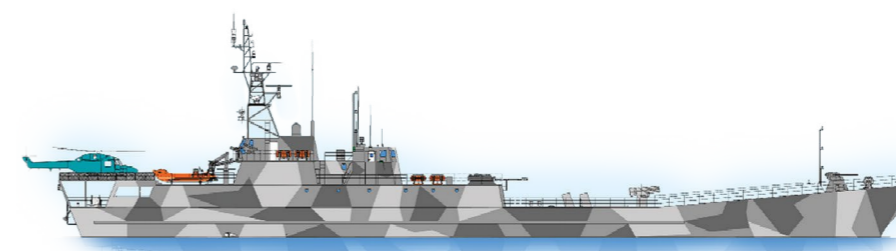
WEAPONS:

- 2x12,7 mm MGs

LANDING SHIP TANK

TRITON

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



MAIN PERFORMANCE DATA

Length, overall	87,9 m
Beam, overall	10,0 m
Draught, max	2,6 m
Displacement, full load	1390 t
Complement	25
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

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

FAST PATROL BOAT

BRIZ-40M

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



MAIN PERFORMANCE DATA

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

FAST COAST GUARD BOAT

BRIZ-40P

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.

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 PERFORMANCE DATA

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

MULTIPURPOSE FAST CORVETTE

PC655

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



MAIN PERFORMANCE DATA

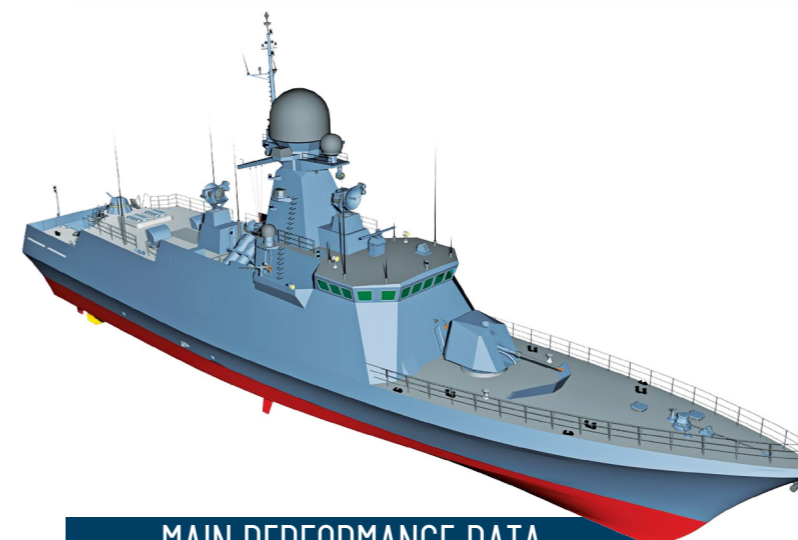
Length, overall	67,70 m
Beam, overall	10 m
Draught, max	4,7 m
Displacement, full load	640 t
Max speed	not less 32 kts
Propulsion	4 diesels
Endurance	8 days
Range (at 14 kts)	4000 NM

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

MULTIPURPOSE CORVETTE

MUSSON

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



MAIN PERFORMANCE DATA

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

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

FAST ATTACK CRAFT CARACAL

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



MAIN PERFORMANCE DATA

Length, overall	54,2 m
Beam, overall	9,3 m
Draught, max	2,5 m
Displacement, full load	455 t
Max speed	not less 28 kts
Endurance	15 days
Complement	35
Propulsion	CODAG
Range (at 14 kts)	not less 2000 NM

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
- Intruder detection Sonar
- Integrated bridge system

WEAPONS:

- 2x4 SSM
- Close-in SAM system
- 57-76 mm gun
- 30-35 mm gun
- Chaff decoy launchers

SMALL ARMORED BOAT GURZA-M



MAIN PERFORMANCE DATA

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

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

CORVETTE 58250 PROJECT

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.



MAIN PERFORMANCE DATA

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
Range (at 14 kts)	4000 NM
Propulsion	CODOG

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

OFFSHORE PATROL VESSEL DOZOR

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



MAIN PERFORMANCE DATA

Length, overall	73,70 m
Beam, overall	10,98 m
Draught, max	3,5 m
Displacement, full load	960 t
Range (at 12 kts)	3800 NM
Endurance	15 days
Propulsion	2 diesels

SENSORS AND COMMUNICATION:

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

WEAPONS:

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

FAST ASSAULT CRAFT KENTAVR

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.



MAIN PERFORMANCE DATA

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

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)

ATTACK CRAFT-MISSILE PEARL-FAC

Designed to counteract the surface ships of missile boat type.



MAIN PERFORMANCE DATA

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

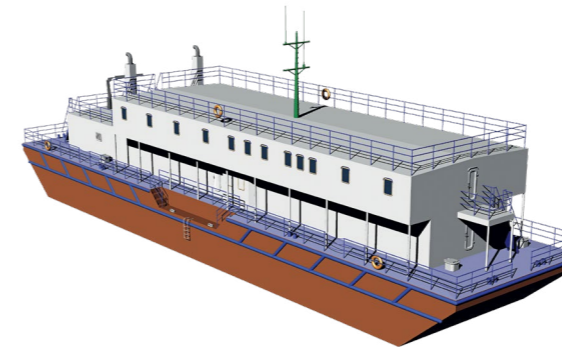
SENSORS AND COMMUNICATION:

- 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

NON-SELF-PROPELLED INTEGRATED SUPPORT VESSEL FOR COAST GUARD BOATS



MAIN PERFORMANCE DATA

Length, overall	43,0 m
Beam, on design WL	41,0 m
Draught, max	10,0 m
Displacement, full load	900 t
2 Diesel generators	2 x 125 kW
Main switchboard	
Tanks capacity:	
- fuel	45,0 m³
- fresh water	12,0 m³
- oil-containing water	3,0 m³
- sewage	12,0 m³

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.

FAST ARMORED BOAT KONAN 750BR



MAIN PERFORMANCE DATA

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
Cruising range at economical speed 22 knots	250 mile

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.



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

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 PERFORMANCE DATA

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 WJ2, 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 WJ2, 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=6,3/0,4 kV; 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 WJ6, 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 WJ6, traction force 80 kN (8 t).



FRIGATE HETMAN SAHAIDACHNY

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

SENSORS AND COMMUNICATION:

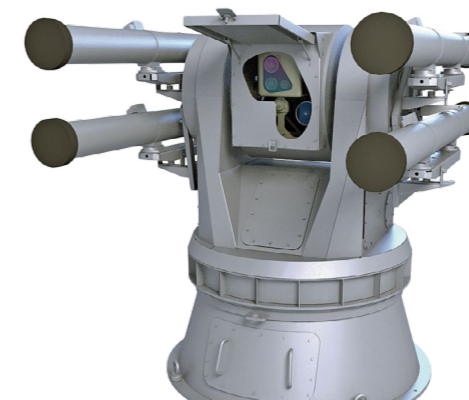
- Data highway/Distributed processors
- Data Link System
- 3-D Long Range Air/Surface Surveillance radar
- 2, Navigation radars
- Surface Surveillance radar
- Fire Control radar & tracker for SAM
- 2, Fire Control radars & EO trackers for Gun&CIWS
- ESM/ECM
- Hull mounted Sonar & VDS
- IFF
- External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

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

MAIN PERFORMANCE DATA

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 power plant	COGAG
Range	3900 NM at 14 kts
Endurance	30 days

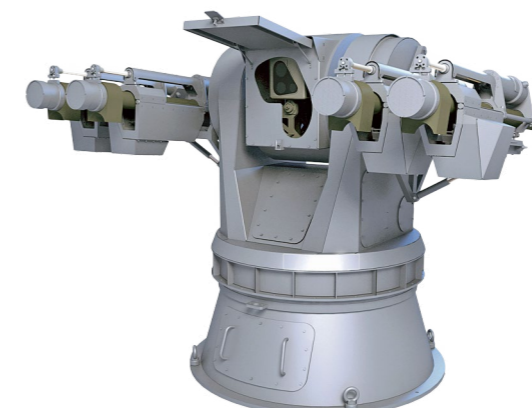


NAVAL MISSILE GUIDED WEAPON SYSTEM BAR'ER-VK

“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.

MAIN PERFORMANCE DATA

Maximum firing range	not less than 7000 m
Flight time to maximum range	62,00 s
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
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
Warhead, high-explosive fragmentation with number of fragments of 2-3 g weight	up to 900 pcs



NAVAL SHORT RANGE AIR DEFENSE SYSTEM ARBALET-K

«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 «Igl'a» type.

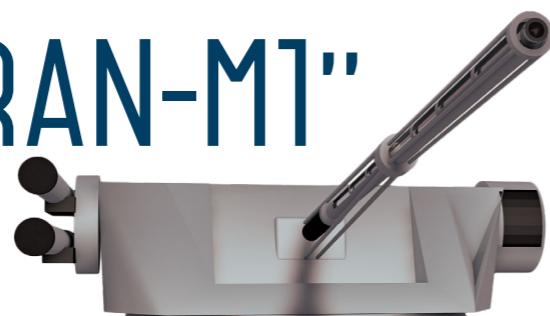
MAIN PERFORMANCE DATA

Target destruction range	500 - 5000 m
Weight system	1020 kg
Target detection range at day time	10 km
Target detection range at night time	7 km
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

REMOTE WEAPON STATION (RWS)

BM.5-1 "KATRAN-M1"

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.



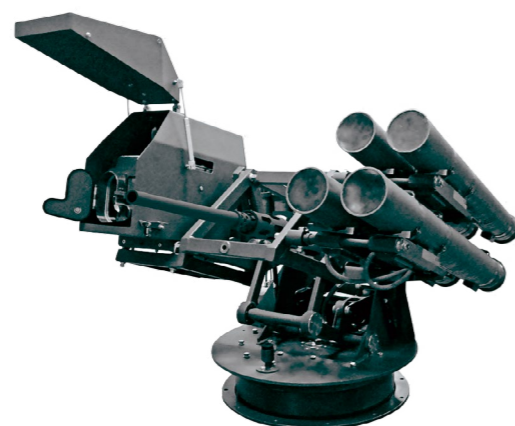
MAIN PERFORMANCE DATA

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
Cannon	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	PKT, 7,62 mm
Antitank guided missile system	Complex 212

REMOTE WEAPON STATION (RWS)

SARMAT

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.



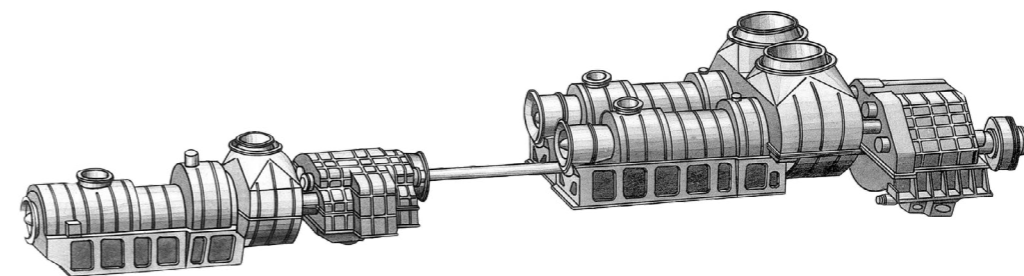
MAIN PERFORMANCE DATA

Full combat weight	410 kg
Readiness Time	20 s
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	

MARINE POWERPLANT

M5N

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



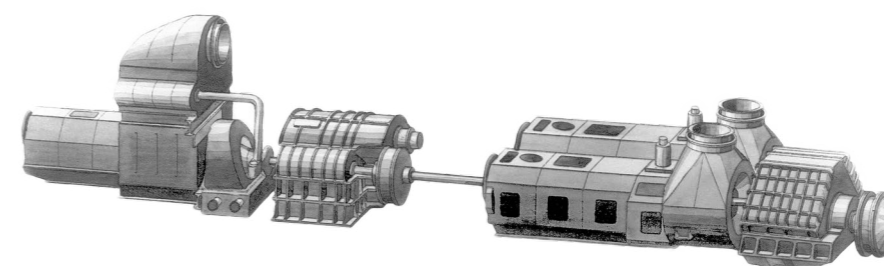
MAIN PERFORMANCE DATA

Displacement	9,500 t
Speed	32,5 knot
Power	92,000 h.p.
Engines:	
- UGT16000	4 unit
- UGT6000	2 unit
Reducers:	
- RG54	2 unit
- R063	2 unit

MARINE POWERPLANT

M21

Designed for ships of project 1164 (Atlant)



MAIN PERFORMANCE DATA

Displacement	11,500 t
Speed	32,5 knot
Power	110,000 h.p.
Engines:	
- UGT16000	4 unit
- UGT6000	2 unit
Reducers:	
- RG54	2 unit
- R028	2 unit

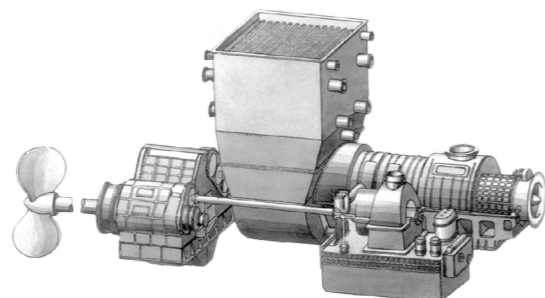
MARINE POWERPLANT

M25

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

MAIN PERFORMANCE DATA

Displacement	35,000 t
Speed	25 knot
Power	50,000 h.p.
Engines: UGT16000	2 unit
Steam turbine:	2 unit
Reducers: P025	2 unit



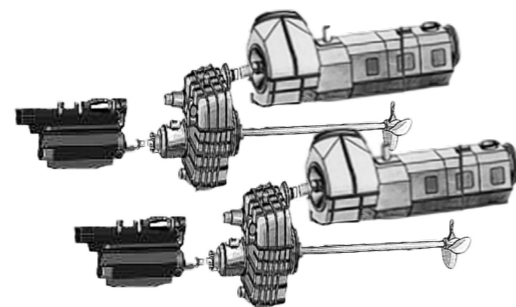
MARINE POWERPLANT

M55R

Designed for ships of project 22350 (Admiral Gorshkov).

MAIN PERFORMANCE DATA

Displacement	4,500 t
Speed	29 knot
Power	65,000 h.p.
Engines: UGT15000+	2 unit
Diesel:	2 unit
Reducers: P055	2 unit



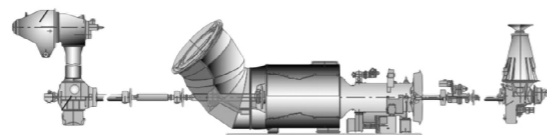
MARINE POWERPLANT

M73

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

MAIN PERFORMANCE DATA

Displacement	175 t
Speed	over 50 knot
Power	24,000 h.p.
Engines: UGT6000+	2 unit
Reducers:	
- RS73-10	2 unit
- RS73-20	2 unit
- RS73-30	2 unit



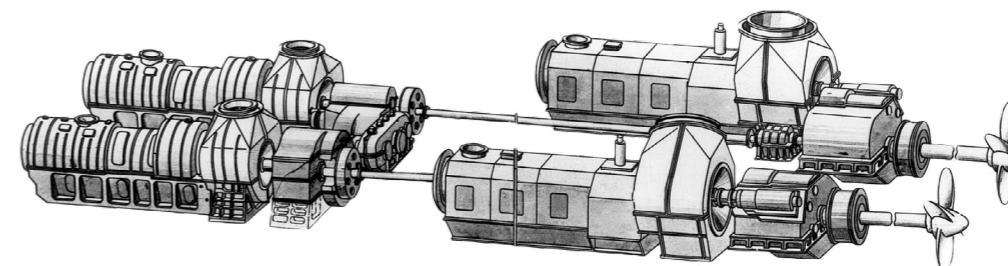
MARINE POWERPLANT

M9B

Designed for ships of project 1155 (Frigate).

MAIN PERFORMANCE DATA

Displacement	8,500 t
Speed	29 knot
Power	74,000 h.p.
Engines:	
- UGT15000	2 unit
- UGT16000	2 unit
Reducers:	
- R058	2 unit
- RA28	2 unit
- R1A63 (with power transfer to other board)	1 unit



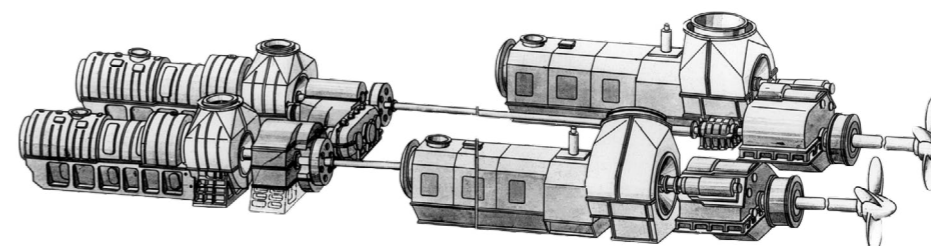
MARINE POWERPLANT

M7N1

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

MAIN PERFORMANCE DATA

Displacement	3,500 t
Speed	30 knot
Power	58,000 h.p.
Engines:	
- UGT15000	2 unit
- UGT16000	2 unit
Reducers:	
- R058	2 unit
- R063	1 unit
- R1063 (with power transfer to other board)	1 unit



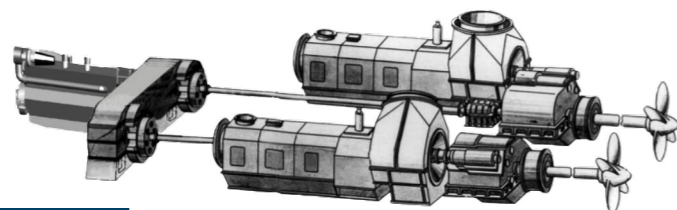
MARINE POWERPLANT

M44

Designed for ships of project 11661 (Gepard).

MAIN PERFORMANCE DATA

Displacement	1,500 t
Speed	32,5 knot
Power	33,000 h.p.
Engines: UGT15000	2 unit
Diesel:	1 unit
Reducers, RA28	2 unit
Reducers, R044	1 unit



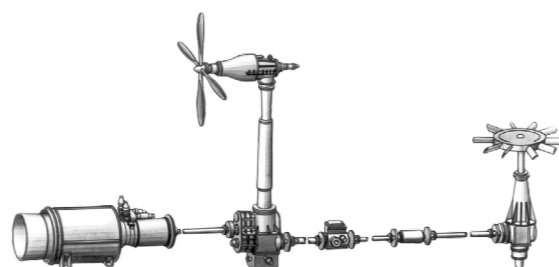
MARINE POWERPLANT

MT70

Designed for ships of project 12061 (Murena).

MAIN PERFORMANCE DATA

Displacement	130 t
Speed	60 knot
Power	20,000 h.p.
Engines: UGT6000	2 unit
Reducers, R071	2 unit
Reducers, RS73-20	2 unit
Reducers, RS73-30	2 unit



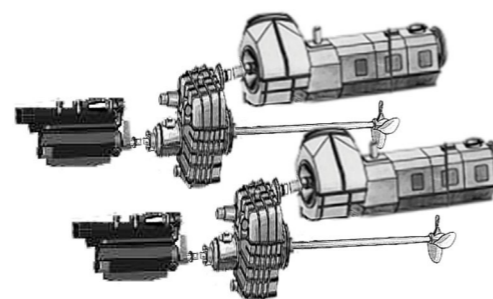
COMBINED DIESEL AND GAS (CODAG) POWERPLANT

GODAG PLANT

Designed for ships of project 052V, 052S.

MAIN PERFORMANCE DATA

Displacement	7,000 t
Speed	30 knot
Power	92,000 h.p.
Engines: UGT25000	2 unit
Diesel	2 unit



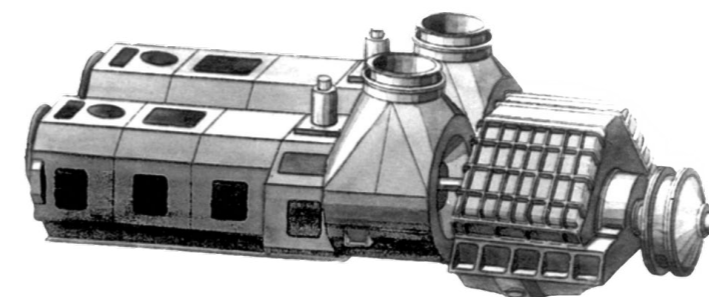
MARINE POWERPLANT

M36

Designed for ships of project 15 (Delhi).

MAIN PERFORMANCE DATA

Displacement	8,000 t
Speed	34 knot
Power	88,000 h.p.
Engines:	
- UGT16000	4 unit
- Diesel	2 unit
Reducers:	
- RG54	2 unit



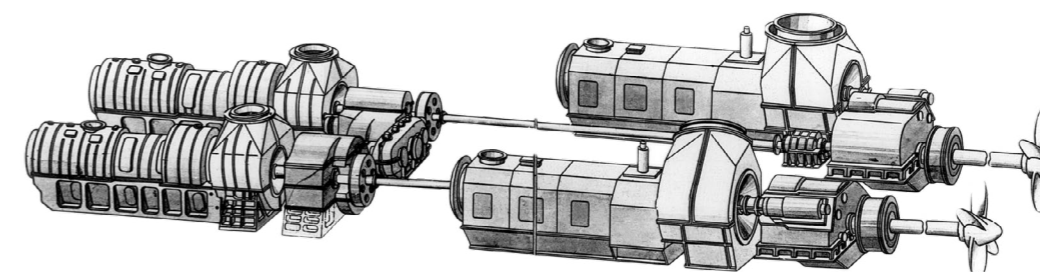
MARINE POWERPLANT

M27

Designed for ships of project 1154 (Yastreb).

MAIN PERFORMANCE DATA

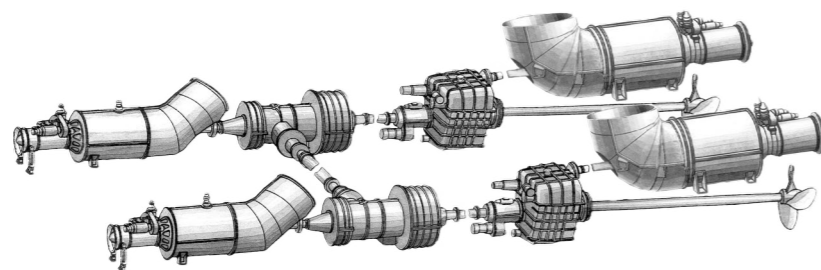
Displacement	3,700 t
Speed	30 knot
Power	54,000 h.p.
Engines:	
- UGT15000	2 unit
- UGT6000	2 unit
Reducers:	
- R058	2 unit
- R063	1 unit
- R1063 (with power transfer to other board)	1 unit



MARINE POWERPLANT

M15-V

Designed for ships
of project 1241
(Molniya).



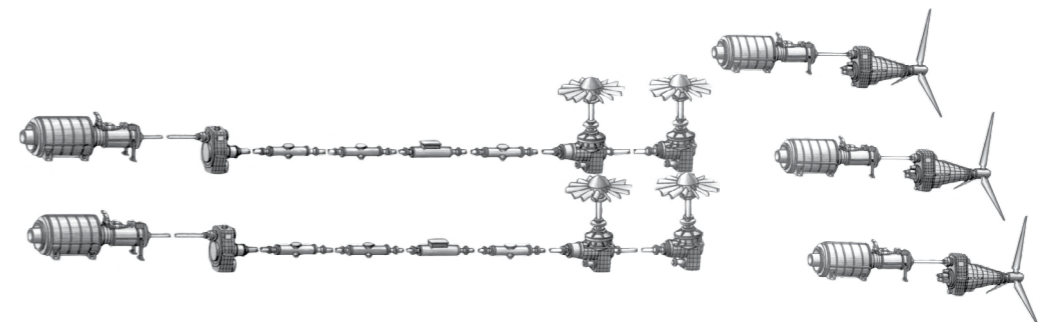
MAIN PERFORMANCE DATA

Displacement	500 t
Speed	43 knot
Power	32,000 h.p.
Engines:	
- UGT3000	2 unit
- UGT6000	2 unit
Reducers:	
- R076 (with power transfer to other board)	2 unit
- R077	2 unit

MARINE POWERPLANT

M35

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



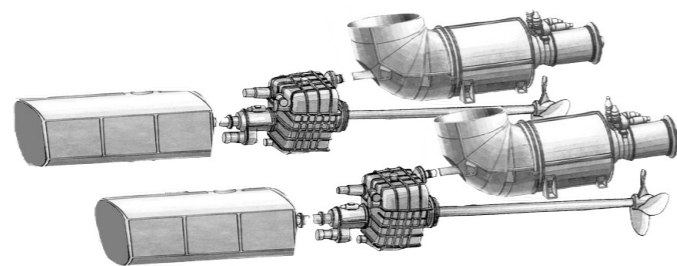
MAIN PERFORMANCE DATA

Displacement	550 t
Speed	63 knot
Power	50,000 h.p.
Engines:	
- UGT6000	5 unit
Reducers:	
- R035-10	3 unit
- R035-20	2 unit
- R035-22	2 unit

MARINE POWERPLANT

M15-A

Designed for ships of
project 1241 (Molniya).



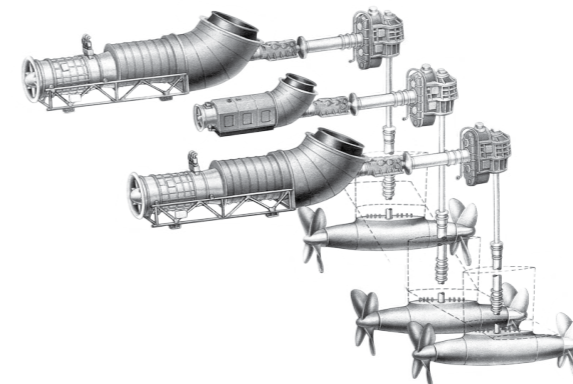
MAIN PERFORMANCE DATA

Displacement	470 t
Speed	41 knot
Power	30,000 h.p.
Engines:	
- UGT6000+	2 unit
- Diesel	2 unit
Reducers:	
- R077	2 unit
Hydro-mechanical gearbox GMP	2 unit

MARINE POWERPLANT

M10/M16

Designed for corvettes
ASW of project 11451
(Sokol).



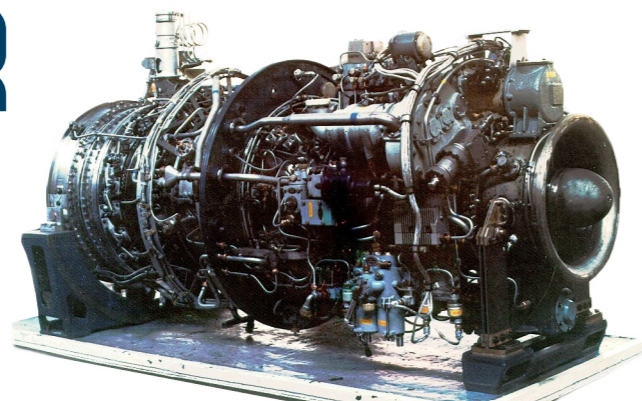
MAIN PERFORMANCE DATA

Displacement	510 t
Speed	60 knot
Power	48,000 h.p.
Engines:	
- UGT6000	1 unit
- UGT16000	2 unit
Reducers:	
- RD50	3 unit
- R1D50	3 unit

GAS-TURBINE ENGINE

UGT 3000R

Engine is designed for marine propulsion systems of displacementtype ships.



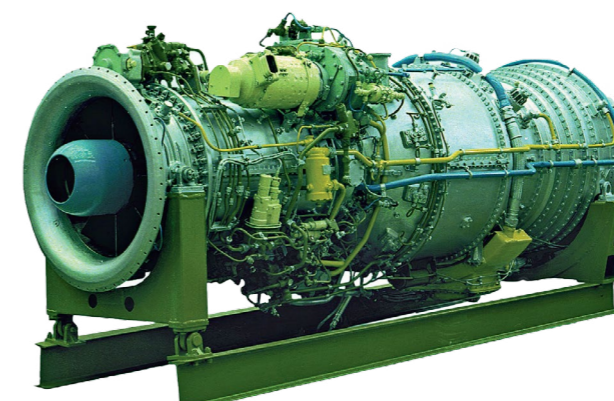
MAIN PERFORMANCE DATA

Efficiency	29,0%
Power turbine rotary speed	8,800 rot/min
Power	3,360 kW
Engines:	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

GAS-TURBINE ENGINE

UGT 6000+

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



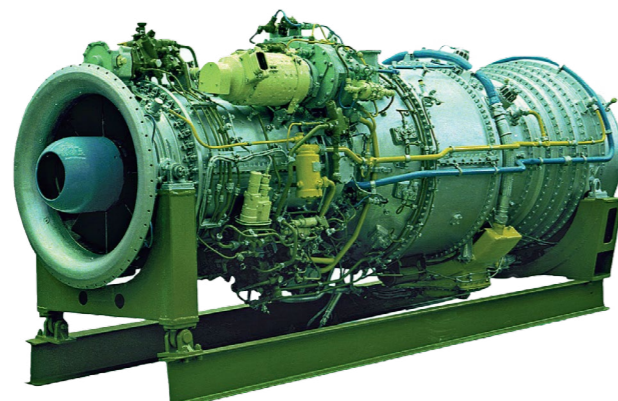
MAIN PERFORMANCE DATA

	UGT 6000+	UGT 6000R+
Efficiency	33,0%	31,0%
Power turbine rotary speed	7,000 rot/min	7,300 rot/min
Power	8,800 kW	8,800 kW
Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,255 kg/(kW h)	0,272 kg/(kW h)
Exhaust gas mass flow	34,0 kg/s	34,5 kg/s
Exhaust gas temperature	470 °C	500 °C

GAS-TURBINE ENGINE (DP71. DM71)

UGT 6000

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



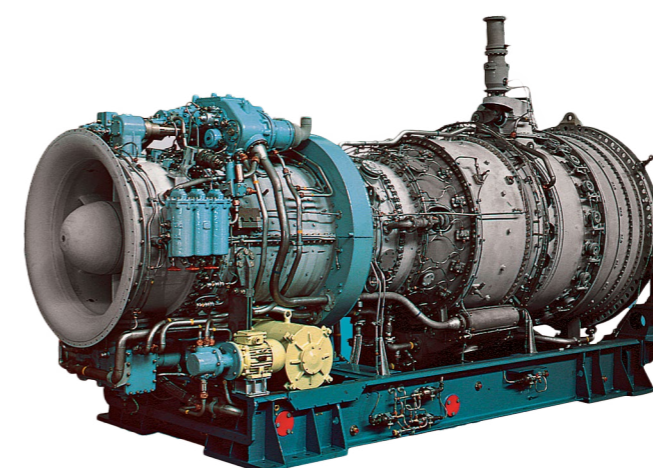
MAIN PERFORMANCE DATA

	DP71, DM71	DS71
Efficiency	32,0%	30,0%
Power turbine rotary speed	7,000 rot/min	4,750 rot/min
Power	7,350 kW	7,350 kW
Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,263 kg/(kW h)	0,281 kg/(kW h)
Exhaust gas mass flow	32,0 kg/s	32,5 kg/s
Exhaust gas temperature	440 °C	470 °C

GAS-TURBINE ENGINE (DA90)

UGT 15000

Engine is designed for marine propulsion systems of displacementtype ships.



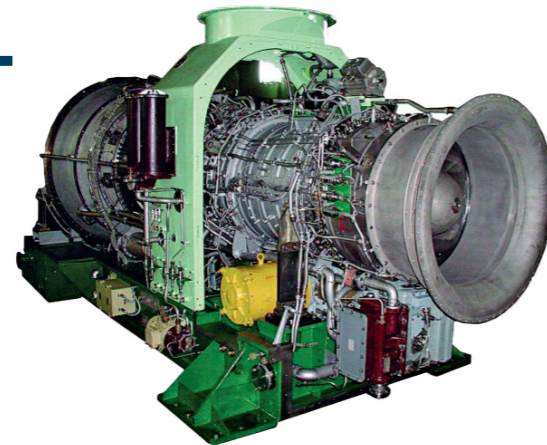
MAIN PERFORMANCE DATA

	UGT15000	UGT15000R
Efficiency	35,4%	32,0%
Power turbine rotary speed	5,300 rot/min	4,400 rot/min
Power	17,650 kW	14,700 kW
Specific liquid fuel consumption (Hu=10200 kcal/kg)	0,238 kg/(kW h)	0,263 kg/(kW h)
Exhaust gas mass flow	73,0 kg/s	70,0 kg/s
Exhaust gas temperature	430 °C	430 °C

GAS-TURBINE ENGINE

UGT 15000+

Engine is designed for marine propulsion systems of displacementtype ships.



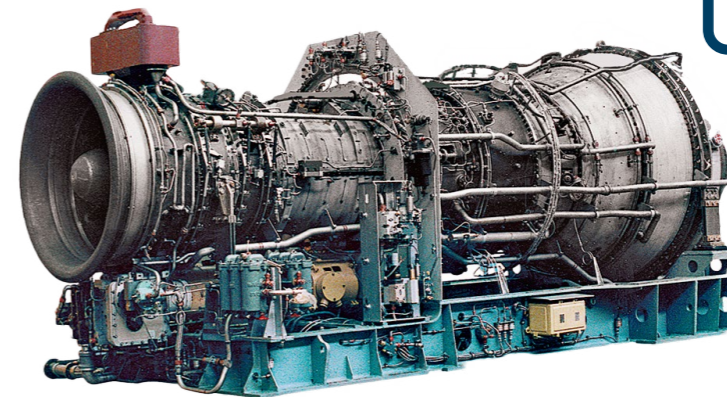
MAIN PERFORMANCE DATA

Efficiency	36,0%
Power turbine rotary speed	3,500 rot/min
Power	20,000 kW
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

GAS-TURBINE ENGINE (DA80)

UGT 25000

Engine is designed for marine propulsion systems of displacementtype ships.



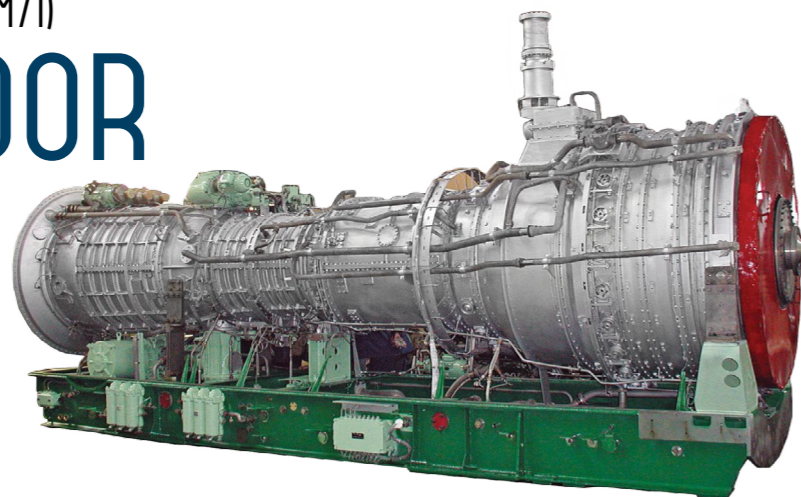
MAIN PERFORMANCE DATA

Efficiency	37,0%
Power turbine rotary speed	3,400 rot/min
Power	28,700 kW
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

GAS-TURBINE ENGINE (DP71. DM71)

UGT 16000R

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



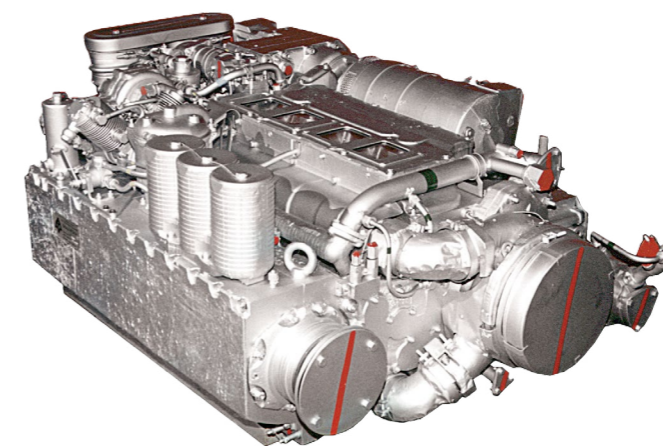
MAIN PERFORMANCE DATA

Efficiency	30,0%
Power turbine rotary speed	3,600 rot/min
Power	16,550 kW
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

DIESEL ENGINE

457KM

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



MAIN PERFORMANCE DATA

Engine dry weight	1,050 kg
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

NAVAL AUTOMATED TACTICAL DATA SYSTEM

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



MAIN PERFORMANCE DATA

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 PERFORMANCE DATA

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	

MAIN PERFORMANCE DATA

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
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°

OPTICAL ELECTRONIC SYSTEM OF GUN MOUNT FIRE CONTROL

SENS-2

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



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

SAGA

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 PERFORMANCE DATA

Energy consumption	Not more than 1,5 kW
Weight of system	Not more than 230 kg
Helicopter segment weight	Not more than 7 kg
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	

MARINE OPTOELECTRONIC FIRE CONTROL SYSTEM OF
SMALL AND MIDDLE ARTILLERY CALIBER

SARMAT

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



MAIN PERFORMANCE DATA

Weight without SPTA	416 kg
Including Weight of optoelectronic direction unit	217 kg
Power consumption	2 kW
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
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 PERFORMANCE DATA

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



HYDROACOUSTIC STATION FOR SEARCHING
OF SABOTEUR UNDERWATER SWIMMERS

TRONKA-MK

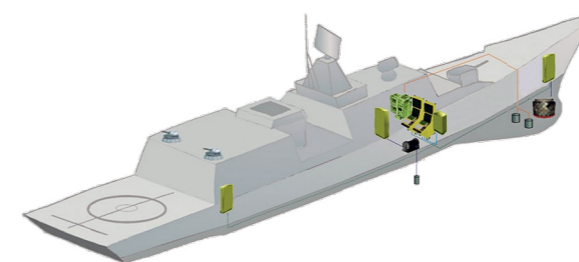
MAIN PERFORMANCE DATA

Detection range of saboteur underwater swimmers in flippers	up to 800 m
Antenna immersion depth	up to 50 m
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

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

HYDROACOUSTIC STATION



MAIN PERFORMANCE DATA

Coverage range	up to 40 km
Power:	20 kW

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

SONAR SYSTEM MGK-369

MAIN PERFORMANCE DATA

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
Antenna immersion depth (towing)	up to 200 m
Sonar System carrier - hydrofoil ship of 11451project	

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.

HYDROACOUSTIC STATION FOR SEARCHING OF SEA MINES AND SMALL UNDERWATER OBJECTS

CATRAN

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.

MAIN PERFORMANCE DATA

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

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.



MAIN PERFORMANCE DATA

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 PERFORMANCE DATA

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

HYDROACOUSTIC STATION OF UNDERWATER SEARCHING OF SMALL FAST-MOVING OBJECTS

HYDROACOUSTIC STATION

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.

MAIN PERFORMANCE DATA

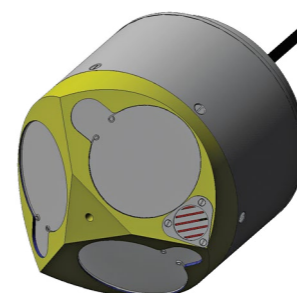
Acquisition range	Up to 5 km
Positioning accuracy:	
- in range	Up to 25°
- on bearing	Up to 1°
Surveillance sector:	
- in horizontal direction	360°
- in vertical direction	20°

HELICOPTER'S SONAR STATION

MAIN PERFORMANCE DATA

Operating range	Up to 40 km
Antenna immersion depth	Up to 150 m
Search sector	360°
Weight of outboard equipment	Up to 100 kg
Weight of on-board equipment	Up to 150 kg

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



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 PERFORMANCE DATA

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)

MAIN PERFORMANCE DATA

Service lifetime	24 month
Distance to coastal receiving post	30 km
Weight, (without cable)	40 – 70 kg
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

AERONAUTICAL SONAR BUOY

RSL-16

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



MAIN PERFORMANCE DATA

Sonar operating range	2-5000 Hz
Hydroacoustic antenna immersion depth	Up to 300 m
Weight	10 ± 0,5 kg
Carrier transmitter frequency	Up to 173,45 MHz
Overall dimensions	120 x 1260 mm

AERONAUTICAL SONAR BUOY

RGB-NM 1

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



MAIN PERFORMANCE DATA

Sonar operating range	infrasonic
Hydroacoustic antenna immersion depth	25, 75 and 150 m
Weight	7,5 kg
Radio transmitter carrier frequency	to 53,45 MHz
Overall dimensions	120 x 1000 mm

AERONAUTICAL SONAR BUOY

RGB-26



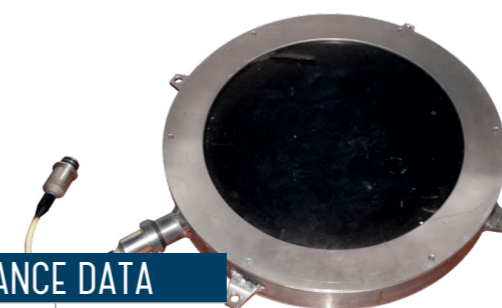
MAIN PERFORMANCE DATA

Overall dimensions, diameter	150 mm
Overall dimensions, length	1260 mm
Weight, (without cable)	Not more 15 kg
operating principle	Passive directed
frequency range	10 -120 Hz / 10- 250 Hz
Antenna immersion depth	25; 150; 300 m
Transmitter power, not less	1,0 W

HYDROACOUSTIC CONVERTER

PZ-270

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



MAIN PERFORMANCE DATA

Resonance frequency	270 Hz
Overall dimensions	515x67 mm
Weight	48 kg
Emission power	25 W
Operating voltage	600 V
Operating depth	Up to 80 m

POWER LOW-FREQUENCY CONVERTER

PZ-525

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



MAIN PERFORMANCE DATA

Resonance frequency	525 Hz
Overall dimensions	1250x830x400
Weight	650 kg
Emission power	2000 W
Operating voltage	1000 V
Operating depth	up 200 m

POWER LOW-FREQUENCY CYLINDRICAL CONVERTER

PZTS-900

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

MAIN PERFORMANCE DATA

Resonance frequency	900 Hz
Overall dimensions	1200x210x470
Weight	170 kg
Emission power	1000 W
Operating voltage	1600 V
Operating depth	Up to 100 m



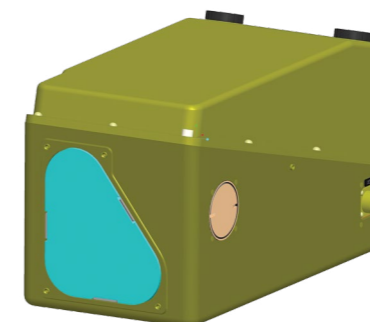
POWER LOW-FREQUENCY CYLINDRICAL CONVERTER

PZTS -1200

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

MAIN PERFORMANCE DATA

Resonance frequency	1200 Hz
Overall dimensions	700 x 900
Weight	600 kg
Emission power	9000 W
Operating voltage	1000 V
Operating depth	Up to 300 m



GUIDANCE DEVICE

PN-VK

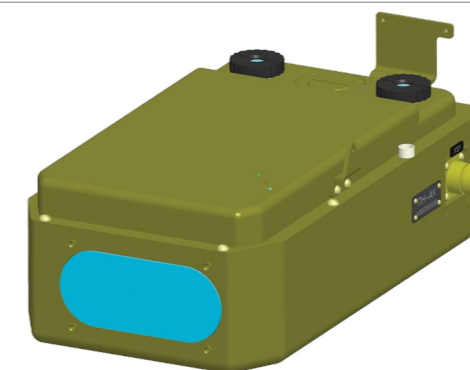
The guidance device for the «Barrier VK» naval guided missile system is designed to search and monitor a target as well as to form the information control field for missile guiding within the structured laser beam using the method of teleorientation.

MAIN PERFORMANCE DATA

Overall dimensions	413x227x224
Weight	not more than 15,0 kg
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 104 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.



GUIDANCE UNIT

PN-AK

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

MAIN PERFORMANCE DATA

Target detection range	2,5x2,5 m
Overall dimensions	359x214x148
Weight	max. 9,0 kg
At daytime with meteorological range of visibility of 25 km:	
- natural illumination from 100 to 104 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



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