



"In our new developments, we try to take into account all the experience we have accumulated, whether it is design or technological experience, we study and take into account the experience of the combat use of both our equipment and that of other manufacturers, and we believe that this or that design should be taken into account to the maximum all available experience.

The required level of protection, capacity, mobility and an outstanding cross-country capability — this is a pool of features making our vehicles the best-in-class. And we prove this daily — by deed, not by word."

Aleksandr Krasovitsky,
Director General VPK LLC

A handwritten signature in blue ink, appearing to be 'A. Krasovitsky', written in a cursive style.

MILITARY INDUSTRIAL COMPANY LLC
**CONFIDENT SUCCESSFUL
FORWARD MOVEMENT**





The Military Industrial Company LLC (VPK in Russia) is responsible for development, modernization and research of the prospects of the whole VPK product mix. Thus, the company is becoming the Defence Ministry's and other uniformed services' strategic contractor responsible for the development and supply of products built by company's subsidiaries under the governmental armament acquisition programme.

Established in August 2006 VPK LLC develops and makes armoured personnel carriers, armoured multipurpose and special vehicles for security and law enforcement purposes that are cutting-edge examples of the armament on the world market and make up the mainstay of the Russian Army and other uniformed services, as well as the armies in more than 40 countries of the world.

At present, VPK is a management company for the manufacturing enterprises specializing in military gear production, in-

cluding the Arzamas Machinery Plant JSC in the city of Arzamas, Armoured Hull Plant JSC in Vyksa, Military Engineering Centre LLC in Nizhny Novgorod and Bryanskiy Arsenal PJSC in Bryansk, whose personnel amounts to about 5,000.

The existing research, industrial and material resources and personnel qualification allow attaining the objectives and meeting the demand of the domestic and foreign armament markets. The company holds the appropriate licenses to develop, produce, repair and dispose of military materiel. Military Industrial Company (VPK LLC) is a leading company specializing in production of wheel-mounted armoured vehicles in Russia and takes the desired position among the world's leading manufacturers of armoured vehicles.

The impeccable reputation of the Company, earned through years of hard work, is also the result of continuous multi-stage quality control of products. All equipment developed and sup-

plied by VPK LLC undergoes official State tests in which representatives of specialized organizations of law enforcement agencies take part, and is also controlled by technical control departments and military missions.

A high quality of vehicles manufactured by VPK, conformity with customers' requests as well as business reputation attained for years of hard work and efforts allow VPK to successfully develop foreign economic relations and carry out foreign economic activities in merchandizing and cooperation of production.

The whole range of products manufactured by VPK is available for foreign customers. According to Russian laws, VPK LLC sells military equipment via Rosoboronexport JSC, a government-owned trade agent, while non-military products are supplied directly to customers. With long-term experience in this field, Military Industrial Company applies a flexible approach and builds specific relations with each customer, trying to meet



all requirements as far as possible. As a rule, any arising questions and problems can be solved even at a stage of preliminary discussion of export agreement terms and conditions due to a large list of options available for the company. Moreover, even if the customer places special requirements, our specialists are ready to examine such requests and do their best to complete customer orders or to propose a reasonable compromise solution.

Due to this approach we observe that foreign customers show a growing interest in products manufactured by Military Industrial Company. Now APCs and armoured vehicles produced by VPK LLC are successfully operated by law enforcement and security agencies in several countries in Latin America, Africa, the Middle East and South Asia.

Being relentless in pursuing new goals, the company is striving not only to expand its export products line but also to offer a wide range of different services to customers, including support for timely commissioning of supplied equipment and for mastering equipment operation by crews and technical personnel plus warranty and post-warranty service, repair, modification, upgrade, etc.

The VPK LLC managerial staff pays particular attention to any changes in the world market sector related to wheel-mounted vehicles and carefully studies recent trends in production of this type of vehicles. The company personnel are developing and manufacturing state-of-the-art high-demand products and are also working on advanced prototypes, using technologies and solutions developed by Russian and foreign manufacturers. For this purpose, we build business relations with leading foreign

companies specializing in this field. Joint projects allow VPK LLC to develop and produce new models of armoured vehicles and expand the product range, thus improving the company's competitive capabilities.

For now, Military Industrial Company offers wheel-mounted armoured vehicles showing the performance that complies with requirements defined by the scope of application and often surpasses such requirements.

A long history of production, the Russian school of engineering and design known as one of the best schools in the world along with advanced manufacturing capabilities and qualified personnel allow VPK LLC to take an applicable position in the foreign market for military equipment and related services and successfully compete against rivals.



BTR-82A/AT

ARMoured PERSONNEL CARRIER



BTR-82A / 82AT is a armoured fully amphibious combat wheeled vehicle designed to carry an mechanized infantry or marine squad and special forces units for provide their fire support on the battlefield, and enable the squad to fire from inside the vehicle as well.

The BTR-82A is a product of deep modernization of the BTR 80A armoured personnel carrier, designed to improve the basic combat and operational properties of an armoured vehicle.

Fire power of the armoured personnel carrier has been increased due to installation of a unified combat module with electric drives and two-plane stabilizer of an armament — 30 mm 2A72 automatic cannon and coaxial 7.62 mm PKTM machine gun. The design of the unified module allows it to be equipped with various types of machine gun and artillery weapons, including foreign production.

Protection of the BTR-82A has been improved due to the placement on the hull's internal surfaces of the armoured personnel carrier of anti-fragment protection, an upgraded fire extinguishing system. In general, the survivability of the vehicle increased by 20% compared with the BTR-80A.

Parameters of vehicle maneuverability have been improved due to installation of a more powerful diesel engine, new transmission and suspension components. These measures also improved the total resource of the vehicle, mean off-road speeds, smoothness

of movement and reliability of the chassis in general. High floating capabilities of the vehicle for overcoming water obstacles have been kept at the previous level.

The BTR-82A is equipped as standard with an air conditioning system and an autonomous diesel generator set, which allows for energy supply without using the main engine.

All those measures have twice increased fire efficiency of the BTR-82A as compared with the BTR-80A.

Further modernization of the BTR-82A APC led to the creation of a new modification — the BTR-82AT version of the APC. This vehicle is distinguished by the presence in its weapons complex of a combined gunner sight with optical and thermal imaging channels, a laser range finder and independent stabilization of the sight line in the vertical plane.

The installed set of protective and trellised screens significantly increases bulletproof and anti-cumulative resistance when munitions of large-caliber machine guns (including side and rear projections) and rocket-propelled grenades fall into it.

To fight heavily armoured targets such as tanks or heavy IFVs, fortified emplacements, etc., provisions have been made for stowing a portable Kornet-E ATGM aboard the BTR-82AT.

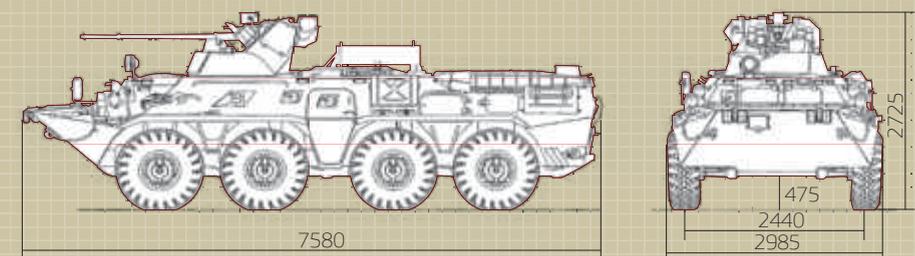
The modernization of the BTR-82A armoured personnel carrier to the BTR-82AT APC level can be carried out using the repair base directly at the customer's locations.

BASIC CHARACTERISTICS

	BTR-82A	BTR-82AT
Combat weight, t	16.0	17.5
Crew + passengers	3 + 7	3 + 6
Dimensions, mm:		
length	7,580	8,250*
height	2,750	2,750
width	2,985	3,480*
Automatic cannon, type and caliber, mm	2A72, 30	2A72, 30
Coaxial machine gun, type and caliber, mm	PKTM, 7.62	PKTM, 7.62
ATGM, type, number of ATGM launchers	no	Kornet-E, 1
Ammunition, pieces:		
for automatic cannon	300	300
for coaxial machine gun	2,000	2,000
ATGM	no	4
Engine type	740.14-300 turbocharged diesel	
Engine power, kW (hp)	220 (300)	220 (300)
Maximal road speed, km/h	80	80
Maximal speed afloat, km/h	9	9
Road endurance, km	700	700

* by grating screens sizes

BTR-82A/AT



BTR-80

ARMoured PERSONNEL CARRIER



The BTR-80 APC is a fully amphibious combat wheeled vehicle designed to carry an infantry or marine squad and provide it fire support in battle and for the squad to fire from inside the vehicle as well.

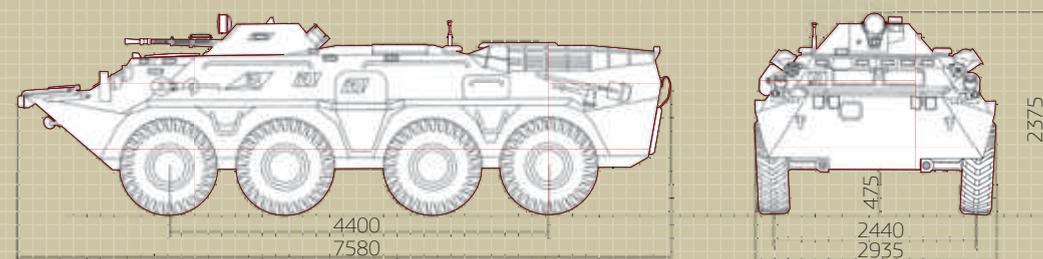
The vehicle mounts a machinegun turret housing a 14.5 mm KPVT heavy machine gun and a 7.62 mm PKTM coaxial machine gun, with their laying angles ranging from -4° to $+60^{\circ}$ in elevation and 360° in traverse. The APC is fitted with a smoke discharger, communications gear, an NBC protection system, fire-suppressant equipment, bilge pumps and a life support system. The crew totals 10, including the squad leader/vehicle commander, driver, gunner and seven infantrymen. Based on the purpose and layout of mechanisms and equipment, the vehicle has the driver's, fighting and engine compartments. The basis of the protection of the crew from enemy fire, including NBC's damaging factors, is the vehicle's all-round armour protection and sealing by means of overpressure. The hull's and turret's armour protects the troops from small-arms fire and artillery shell and mortar bomb fragments. The BTR-80 APC's high agility has been achieved using the eight-wheel all-wheel drive running gear, a powerful fuel efficient diesel engine, independent torsion bar-type increased-travel wishbone suspension of all wheels and damage-resistant lined tires.

The vehicle is equipped with spherical joint firing ports for the troops to fire their assault rifles and light machineguns. The upper hatches of the fighting compartment are fitted with smaller hatches for engaging high-elevation targets with assault rifles. The fighting compartment makes provision for the stowage of the ammunition load for the KPVT and PKTM machineguns, MANPADS (man-portable air-defense system), eight assault rifles, ammo load for the assault rifles and machine guns of the infantrymen, an antitank rocket launcher and its rockets, hand grenades and other kit. The APC can be exited via the two upper doors and two clamshell side doors. The APC is fitted with a 6-tonneforce self-recovery winch.

BASIC CHARACTERISTICS

Combat weight, t	13.72
Crew + passengers	3 + 7
Dimensions, mm:	
length	7,580
height	2,375
width	2,935
Armament, type and caliber, mm:	
heavy machine gun	KPVT, 14.5
coaxial machine gun	PKTM, 7.62
Ammunition, pieces:	
for heavy machine gun	500
for coaxial machine gun	2,000
Engine model, type	7403 turbocharged diesel
Engine power, kW (hp)	191 (260)
Maximal road speed, km/h	not less 80
Maximal speed afloat, km/h	not less 9
Road endurance, km	600

BTR-80



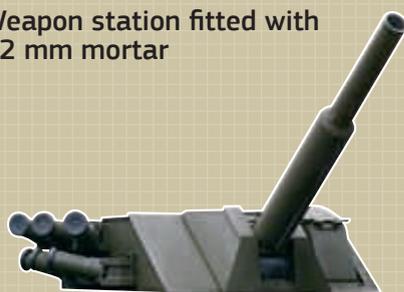
WEAPON INSTALLATION OPTIONS ON THE BTR-80/82 APC CHASSIS



ABM-BSM-30 automated
weapon station



Weapon station fitted with
82 mm mortar



BM-30-D weapon station



BPU-1 turret machine gun
mount fitted with 14.5 mm KPVT



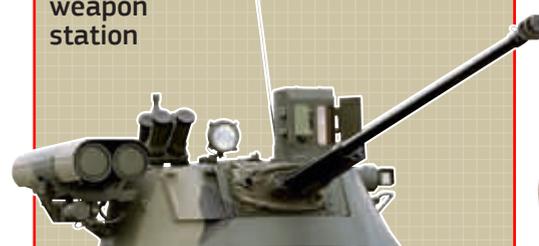
Kornet-DE ATGM system



Arbalet-DM RCWS



Bereg
weapon
station



Burevestnik RCWS



Burevestnik RCWS fitted with
2A42 automatic cannon
and Ataka-T ATGM



Sosna AD system



Burevestnik RCWS
fitted with 2A42 30 mm
automatic cannon



RCWS of foreign production



SBM VPK-233136 TIGR

SPECIAL ARMoured VEHICLE



SBM VPK-233136 TIGR special armoured vehicle is designed for carriage of troops and cargo on general-purpose roads and in rugged terrain, for use as a means of transport and a service vehicle of police forces on counterterrorist operations and riot control operations.

The vehicle provides protection for the crew from small-arms fire and fragments of projectiles and IEDs. In addition, the vehicle can mount special equipment.

The TIGR's armoured monocoque hull provides protection against small arms fire, shell fragments and IED blasts. The hull and door windows are bulletproof and the interior spall liners protect personnel against spalls if the hull is hit by bullets or fragments and exclude ricochet from the opposite side if the hull is pierced (Level 2 by STANAG 4569). Fire support on counterterrorist operations can be provided by firing the infantry machinegun from the vehicle's roof. For this purpose, there are two hatches covered by a single-piece armoured cover.

SBM VPK-233136 TIGR special armoured vehicle (SAV) is powered by the 215-hp YaMZ-5347-10 multi-fuel diesel engine. Its cross-country ability has increased considerably owing to a new design of the axles fitted with locking geared bevel differentials. The effectiveness of the braking system was enhanced by means of advanced braking mechanisms and the auxiliary exhaust brake with the pneumatic actuator controlled from the driver's station.

In order to increase fire safety, automatic fire extinguishing systems of the engine compartment and wheels were mounted on the TIGR SAV. The air conditioning system in the cabin is installed as standard on the vehicle.

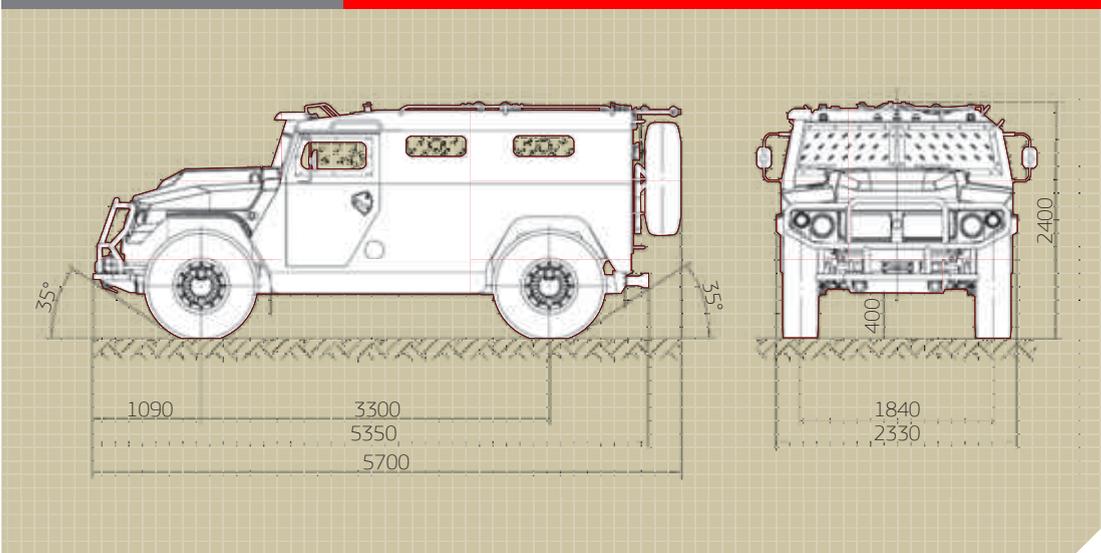
At the request of the Customer, the vehicle can be made in a five-door armoured hull. A circular video surveillance system, anti-traumatic seats, additional steps under the doors, infrared searchlights and other equipment can be installed on it.

Due to the fact that the SBM VPK-233136 TIGR special armoured vehicle is not a military product, so this vehicle in its various versions can be delivered to foreign customers directly from the manufacturer — Military Industrial Company LLC.

BASIC CHARACTERISTICS

Gross vehicle weight, kg	8,200
Number of seats	up to 10
Load capacity, kg	1,200
Dimensions, mm:	
length	5,700
width	2,330
height	2,400
road clearance	400
Engine model and type	YaMZ-5347-10, turbocharged diesel
Max engine power kW (hp)	158 (215)
Max road speed, km/h	not less 120
Fuel endurance, km	1,000
Electric winch pulling force, kgf	4,000

SBM VPK-233136 TIGR



SBM VPK-233136 TIGR

SPECIAL ARMoured VEHICLE
EQUIPPED WITH THE 'RAID' PACKAGE



SBM VPK-233136 TIGR special armoured vehicle equipped with the 'Raid' package is designed for carriage of troops and cargo on general-purpose roads and in rugged terrain, for use as a means of transport and a service vehicle of police forces on counterterrorist operations and riot control operations.

Taking into account the requirements of one of the foreign customers, the designer came up with the 'Raid' package for the SBM VPK-233136 TIGR special armoured vehicle. Unlike the baseline VPK-233136, the 'Raid' package features a five-door armoured hull and several other options introduced to the design at the request of the foreign customer.

Powered by the enhanced YaMZ-5347-24 developing 240-hp compared to 215-hp of the baseline vehicle, this TIGR is equipped with an automatic gear box, all-around view system, as well as footboards under the side and stern doors. Along the perimeter of the front and rear hatch in the vehicle's roof there is a collapsible circular armour protection for the shooter. On the vehicle's roof to the rear there is a luggage rack for transporting special items or equipment.

The Raid version of the SBM VPK-233136 TIGR can carry 9 people, driver included. The package comes with seats, boasting enhanced comfortability and safety properties.

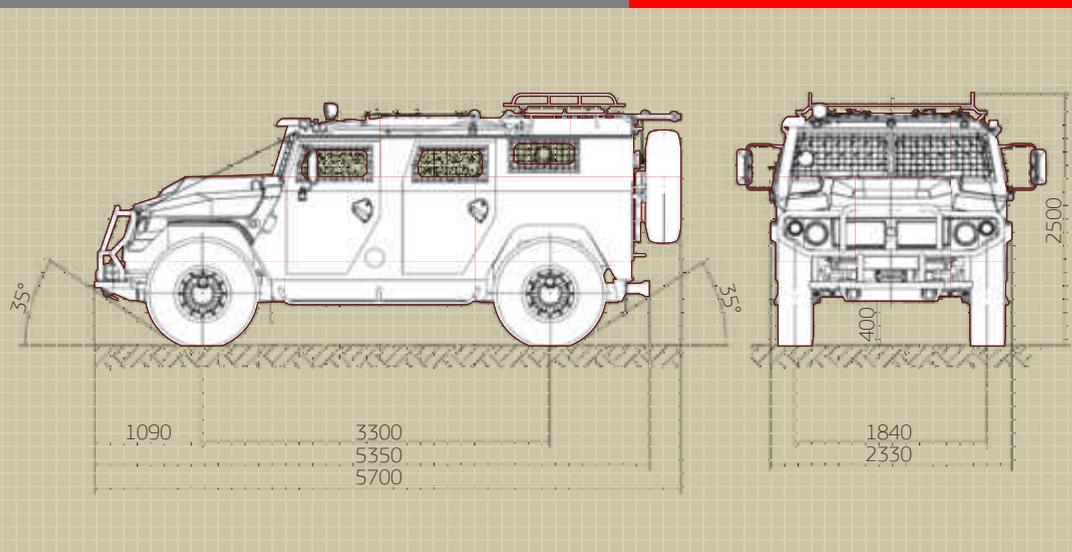
The front part and trim package have been revised. The vehicle got modern LED lighting equipment along with a LED IR spot light. The large internal armoured space in conjunction with high payload, maneuverability and protection predetermined the use of the TIGR special armoured vehicle as a baseline platform for a whole range of special vehicles, such as mobile CP, special communications, electronic warfare, reconnaissance, and NBC. It also became a platform of choice when it comes to deployment of various weapons systems.

Given that the armoured SBM VPK-233136 TIGR equipped with the 'Raid' package is not a full-fledged military product, so the various version of the vehicle can be delivered to foreign customers by the manufacturer — Military Industrial Company LLC — directly.

BASIC CHARACTERISTICS

Gross vehicle weight, kg	8,300
Number of seats	up to 10
Load capacity, kg	1,200
Dimensions, mm:	
length	5,700
width	2,330
height	2,600
road clearance	400
Engine model and type	YaMZ-5347-24, turbocharged diesel
Max engine power kW (hp)	176 (240)
Max road speed, km/h	not less 120
Fuel endurance, km	1,000
Electric winch pulling force, kgf	4,000

SBM VPK-233136 TIGR WITH THE 'RAID' PACKAGE



SBM VPK-233136 TIGR

SPECIAL ARMOURED VEHICLE
WITH A RIGHT-HAND DRIVE



SBM VPK-233136 TIGR special armoured vehicle with a right-hand drive is designed for carriage of troops and cargo on general-purpose roads and in rugged terrain, for use as a means of transport and a service vehicle of police forces on counterterrorist operations and riot control operations in countries where left-hand traffic is traditionally accepted.

Given the great interest in the TIGR special armoured vehicles of the potential customers from the left-hand traffic countries, a right-hand drive (RHD) variant of the SBM VPK-233136 TIGR special armoured vehicle was produced. Having passed all required tests, the derivative went into mass production at the Arzamas Machinery Plant JSC, parented by Military Industrial Company LLC.

The VPK-233136 TIGR special armoured vehicles was originally developed to the specifications of the Russian Ministry of Interior. It is designed to carry personnel, various goods on public roads and in rough terrain, protect the crew and personnel from firearms, ammunition fragments and explosive devices, suitable to perform the role of a transport and operational vehicle in counter-terrorism and riot control operations. In addition, the vehicle can be used to mount special tools and equipment.

It has a protected single-compartment three door armoured hull to shield the crew and troopers in accordance with the Level 2 requirements of STANAG 4569. All hull and door windows, made from bulletproof glass, boast the same ballistic protection class, feature firing ports closed by armoured shutters for shooting service weapon from inside the vehicle.

The number of seats in the SBM TIGR special armoured vehicles with RHD cabin varies from

four to ten, driver's seat included, depending on the seat type, additional equipment deployed inside and other requirements of the customer.

The vehicle features an automatic fire fighting system in the engine compartment. In addition to it, an optional automatic tire extinguishing system can be installed on the SBM VPK-233136 TIGR special armoured vehicles with RHD.

Fire support of units during counter-terrorism operations can be carried out by firing an infantry machine gun from the top of the vehicle. To do this, there are two hatches closed with single-leaf armoured covers.

The baseline package includes an air conditioning system and 4,000-kgf electric winch, mounted on the front bumper. The latter comes with an additional running unit boosting the hook pulling force to 8,000 kgf.

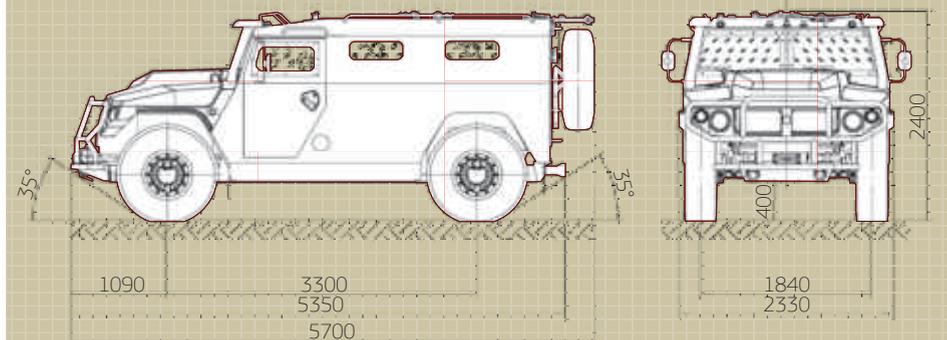
At the request of the customer, the vehicle can be fitted with an all-around view system, shock-absorbing seats, anti-mine rugs, protective grilles for external lights, additional footboards, interior blackout flaps, and other options.

Due to the fact that the SBM VPK-233136 TIGR special armoured vehicle with RHD is not a military product, so this vehicle in its various versions can be delivered to foreign customers directly from the manufacturer – Military Industrial Company LLC.

BASIC CHARACTERISTICS

Gross vehicle weight, kg	8,200
Number of seats	up to 10
Load capacity, kg	1,200
Dimensions, mm:	
length	5,700
width	2,330
height	2,400
road clearance	400
Engine model and type	YaMZ-5347-10, turbocharged diesel
Max engine power kW (hp)	158 (215)
Max road speed, km/h	not less 120
Fuel endurance, km	1,000
Electric winch pulling force, kgf	4,000

SBM VPK-233136 TIGR WITH A RIGHT-HAND DRIVE



AMN 233114 TIGR-M

MULTIPURPOSE VEHICLE



The AMN 233114 TIGR-M multipurpose vehicle is designed to carry troops and cargo, tow towed systems and mount weapons and other combat gear.

The feature of the latest vehicle is its Russian-built YaMZ-5347-10 diesel engine. The multifuel engine is turbocharged and has the aftercooling capability, produces an output of 215 hp. In addition, the TIGR-M has had certain defects ironed out after they had popped up during the operation and tactical use of previous versions of the vehicle (GAZ-233014), with extra requirements by the Russian MoD having been implemented.

The TIGR-M's design has incorporated numerous improvements aimed at enhancing its operating characteristics, reliability, ergonomics and bullet and mine resistance. The vehicle's off-road capability has increased owing to a new design of the axles. The efficiency of the braking system has been boosted through the use of sophisticated brakes and introduction of a pneumatically-actuated auxiliary exhaust retarder controlled from the driver's station.

To protect the engine from small-arms fire, the bonnet is armoured. In addition, the TIGR-M has cross-bar locks in all of its doors, as well as the air conditioner, filtering unit and enhanced- performance engine prestart heater. The TIGR-M's seating capacity stands at 9.

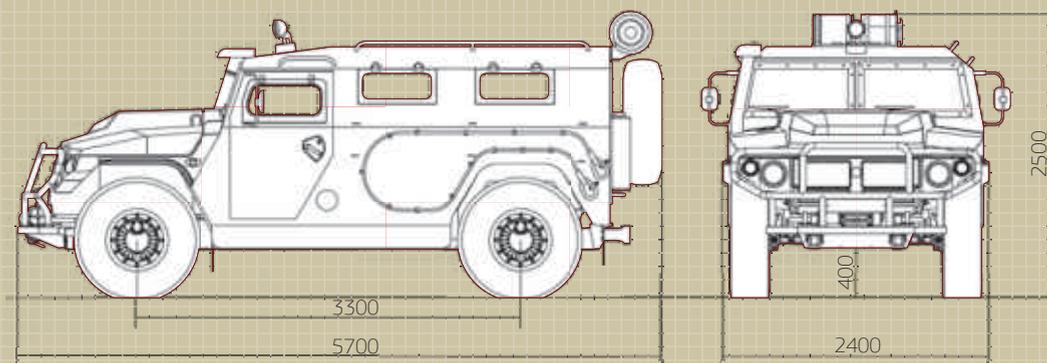
The fuel system got an extra centrifugal pump to enable operation with fuel mixtures, including those containing up to 85% of gasoline. The cooling system efficiency has been increased for operating at high temperatures due to the new radiator unit installed.

At AMN 233114 TIGR-M can be installed Arbalet-DM (Crossbow) remotely-controlled weapon system (RCWS) fitted with a 12.7 mm KORD heavy machine gun. This version of the TIGR armoured vehicle was adopted by the Ministry of Defense of the Russian Federation for service.

BASIC CHARACTERISTICS

Gross vehicle weight, kg	7,800
Number of seats	up to 9
Load capacity, kg	1,200
Gross trailer weight, kg	2,500
Dimensions, mm:	
length	5,700
width	2,400
height	2,500
road clearance	400
Engine model and type	YaMZ-5347-10, turbocharged diesel
Max engine power kW (hp)	158 (215)
Max road speed, km/h	not less 120
Fuel endurance, km	1,000
Electric winch pulling force, kgf	4,000

AMN 233114 TIGR-M



ASN 233115 TIGR-M SPN

SPECIAL PURPOSE VEHICLE



The ASN 233115 TIGR-M SpN is used for reconnaissance, convoy escorting and guarding, patrolling, providing fire support to units during general combat, special and counter-terrorist operations.

The TIGR-M SpN special purpose vehicle (SPV) was designed on the basis of the 233114 TIGR-M armoured multipurpose vehicle (MPV) for the use by special forces personnel. The outward similarity of the armoured vehicle to other vehicles of the family helps to hide the fact that the vehicle belongs to special purpose units from the enemy.

While base model's performance was maintained at virtually the same level, some changes were introduced to the SPV design, allowing special forces personnel to fully utilise the combat vehicle's potential during operations. The main reworking has been done inside of the vehicle, where off-vehicle armament, ammunitions, special purpose and communication equipment are located. The crew can use armament typically used by motorized infantry units, both when inside of the vehicle and when operating independently. To enable firing from the inside of the armoured vehicle, a rotating platform with weapon mounts and a double-leaf hatch is installed on the vehicle hull roof. The single-volume three-door welded armoured hull of the vehicle ensures Level 1 ballistic protection of the persons inside of the vehicle according to STANAG 4569 standard.

The ASN 233115 TIGR-M SpN is equipped with a 215 h.p. YaMZ-5347-10 multi-fuel turbocharged diesel engine. The vehicle's automatic tire pressure control system maintains an optimal comfort level on roads with different surface types, ensures good off-road performance and safety, and enables driving if tires are damaged (have holes or punctures). The interior heater and air conditioning system provide the vehicle crew with a comfortable operating environment.

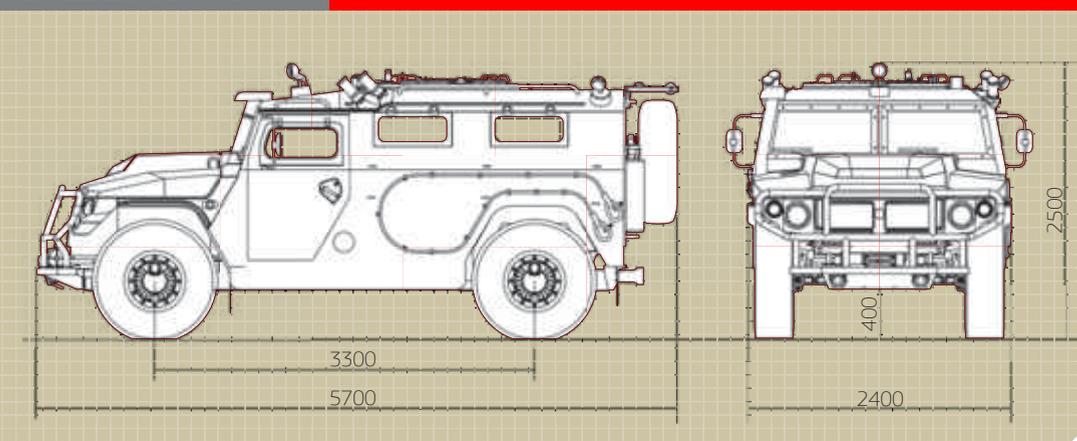
The ASN 233115 TIGR-M SpN is equipped with a large folding hatch. Two weapons variously combined can be mounted on the platform at the same time: a 12.7 mm heavy machine gun, a 7.62 mm machine gun and a 30 mm automatic grenade launcher. Inside the vehicle there are stowage racks for storing ammunition of the weapons installed on the vehicle, as well as the RPG-26 or RShG-2 anti-tank rockets or assault grenades. On the left and right sides of the hull roof in the frontal part there are two 902G Tucha launchers installed for discharging smoke or aerosol grenades.

The TIGR-M SpN is designed to carry six fighters including the driver and is capable of towing a trailer weighting up to 2.5 tons.

BASIC CHARACTERISTICS

Gross vehicle weight, kg	8,080
Number of seats	6
Load capacity, kg	1,200
Gross trailer weight, kg	2,500
Dimensions, mm:	
length	5,700
width	2,400
height	2,500
road clearance	400
Armament, model and caliber, mm:	
heavy machine gun	KORD, 12.7
machine gun	PKP Pecheneg, 7.62
automatic grenade launcher	AGS-17, 30
Engine model and type	YaMZ-5347-10, turbocharged diesel
Max engine power kW (hp)	158 (215)
Max road speed, km/h	not less 120
Fuel endurance, km	1,000
Electric winch pulling force, kgf	4,000

ASN 233115 TIGR-M SpN



ARMAMENT OPTIONS FOR TIGR ARMOURED VEHICLES





Nartsiss RCWS



9A332 Gibka-S
AD system



Kornet-DE ATGM system



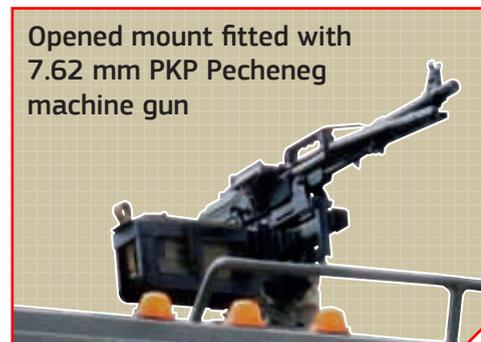
Automated RCWS fitted with 2A72
30 mm automatic cannon



6S21 RCWS fitted with
KORD 12.7 mm machine gun



RWCS of foreign production



Opened mount fitted with
7.62 mm PKP Pecheneg
machine gun



Gorets mount fitted
with 120 mm
2B11 mortar



Opened mount fitted
with 40 mm automatic
grenade launcher



Arbalet-DM RCWS



RCWS fitted with 23 mm
automatic cannon



Opened mount fitted with
KORD or PKP machine gun
and AGS-17 30 mm AGL

59037 / 59037A

ALL-TERRAIN AMPHIBIOUS VEHICLES



59037 and 59037A all-terrain amphibious vehicles are designed to carry passengers and cargo on all kinds of roads, as well as off-roads with a possibility to cross the water barriers.

The vehicle's operation temperature ranges from -40°C to $+40^{\circ}\text{C}$; the vehicle can be stored outdoors. The all-terrain amphibious vehicles are an indispensable means in the areas of flooding and other natural and man-induced disaster-stricken areas for evacuating people and carrying the emergency and rescue equipment.

The 59037/59037A vehicles consist of an eight-wheel four-axle chassis and a monocoque hull. It is conventionally divided into three compartments: driver's, engine and cargo-passenger compartments.

The driver's compartment (driver's place) is located in the front part of the vehicle. This compartment incorporates the vehicle's controls, status and operation control of the equipment, systems and units and electrical equipment. The engine compartment is located in the rear part of the vehicle and is isolated from the inhabited compartments.

This compartment includes: engine and its supporting systems, clutch, transmission gear, preheater, fuel tanks and hydrojet propulsion.

12 passenger seats covered with a canvas may be installed in the cargo-passenger compartment. To facilitate passengers loading and unloading a ladder is envisaged on the drop side of the cargo bed. During transportation of cargoes the passenger seats are dismantled and the canvas is removed. There is a watertight cargo bed with drop sides in the rear of the vehicle above the engine compartment. The vehicle may carry up to 5 tons of cargo.

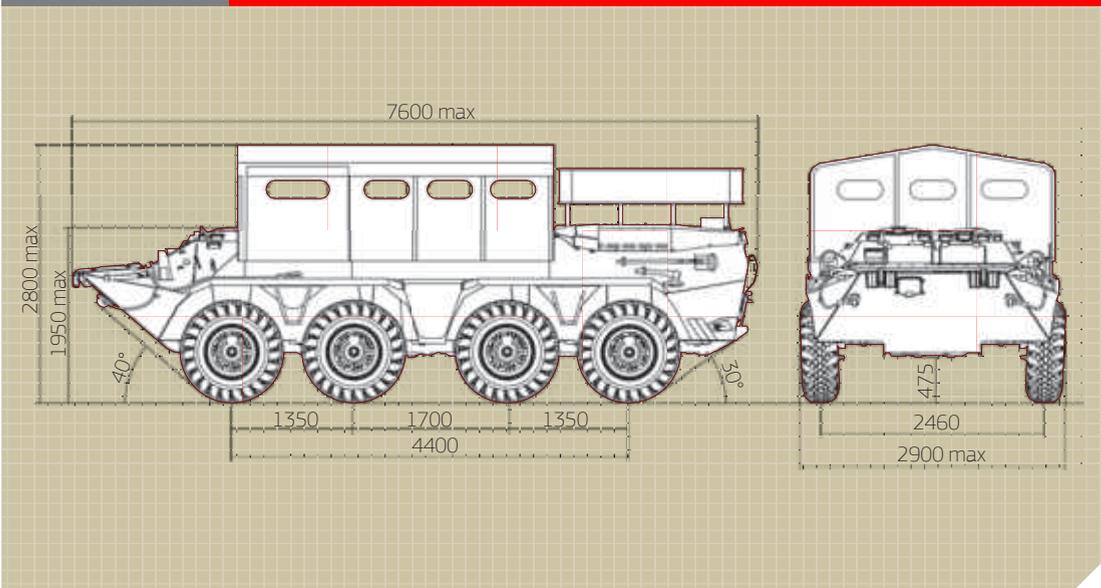
Due to a powerful 260 HP diesel engine, independent torsion-bar suspension of all wheels, high ground clearance (475 mm), inter-axle and inter-wheel differential locks the vehicle is featuring high maneuverability on highway and off-roads.

The 59037A all-terrain amphibious vehicle has a closed passenger compartment. The heated passenger compartment can accommodate 12 people. Freight platform on the 59037A vehicle is missing.

BASIC CHARACTERISTICS

	59037	59037A
Gross vehicle weight, t	14.0	14.0
Passenger capacity, persons	12	12
Cargo carrying capacity, kg	up to 5,000	—
Engine type	740.14-300 turbocharged diesel	
Engine power, kW (hp)	191 (260)	191 (260)
Maximal road speed, km/h	80	80
Maximal speed afloat, km/h	9	9
Road endurance, km	600	600
Endurance afloat at 1,800–2,200 rpm, h	12	12
Cargo bed dimensions, L × W × H, mm	3,080 × 2,750 × 435	—

59037/59037A



ARMoured VEHICLES ON THE BTR-80 CHASSIS



BASIC CHARACTERISTICS

	BTR-80K	BREM-K	K1Sh1	BMM
Combat weight, t	13.6	14.5	12.0	13.6
Crew and combat crew, pers.	3 + 3	1+3	1 + 0	1 + 2
Dimensions, mm:				
length	7,700	7,700	7,650	7,650
height	2,410	3,000	2,630	2,630
width	2,950	2,950	2,950	2,950
road clearance	475	475	475	475
Armament:				
machine gun model and caliber, mm	KPVT, 14.5	PKTM, 7.62	—	—
coaxial machine gun model and caliber, mm	PKTM, 7.62	—	—	—
Engine model and type	7403, V8 turbocharged diesel			
Engine power, kW (hp)	191 (260)	191 (260)	191 (260)	191 (260)
Max road speed, km/h, not less	80	80	80	80
Max amphibious speed, km/h, not less	9	9	9	9
Road endurance, km	600	600	600	600

BTR-80K COMMAND APC

The BTR-80K command vehicle is design for reliable command and control of organic, attached and adjacent units by the infantry battalion commander (marine battalion commander) and for communication with the higher HQ.

The BTR-80K is a derivative of the BTR-80 APC. It has retained its baseline model's basic tactical and technical characteristics and appearance, which allows concealing the position of the battalion command post's position from the enemy in battle.

The command vehicle's crew consists of the vehicle commander, gunner and driver. To accommodate the battalion commander and two of his staff officers, the BTR-80K's fighting compartment has work stations fitted with intercom communication terminals for using the communication radios; folding tables; fans; extra lights, etc. Provision has been made for feeding fresh air to each work station of the crew and commissioned officers, and there are interfaces to connect their gas masks to the filtering unit's ducts.

For the purpose of effective stable continuous responsive and covert C2, the command vehicle is equipped with VHF-UHF radios, intercom/switching equipment, navigation system, 11-m-high antenna mast and artillery periscope director. Provision is also made for stowing the field telephone and reel with 500 m of telephone cable.

The vehicle mounts the BPU-1 machine gun turret housing the 14.5 mm KPVT and 7.62 mm PKTM machine guns with smoke discharger. The ammunition and equipment stowage has been modified somewhat compared with that of the baseline BTR-80.



BREM-K

ARMOURED RECOVERY VEHICLE

The BREM-K is a derivative of the BTR-80 armoured personnel carrier. The vehicle ensures repair using hoisting equipment and electric welding, recovery of vehicles out of light and medium sticking, towing of the disabled vehicles on land and afloat, round the-clock technical monitoring and technical aid to crews in elimination of faults and damage. The BREM-K is equipped with the towing winch for pulling stuck and sunken vehicles out. The tools and accessories kit includes a rigid hitch to tow uncontrolled vehicles. Spare parts are transported on a special platform fixed to the roof of the vehicle. The equipment of BREM-K allows the following:

- repair, including electric welding and electric cutting;
- recovery of vehicles of the same type out of light and medium sticking and lifting of sunken vehicles;
- towing of defective, controlled and uncontrolled vehicles on land and afloat;
- technical monitoring of the battlefield at day and at night;
- technical assistance to crews in maintenance and routine repairs;
- assembly and disassembly operations to replace key assemblies;
- transportation of spare parts and materials.

The BREM-K is mounts a 7.62 mm PKTM machinegun.

K1Sh1

UNIFORM CHASSIS

The K1Sh1 uniform chassis, a wide body offspring of the BTR-80 APC, was developed as the basis for a range of special wheeled vehicles capable of carrying communication, reconnaissance, medical, and other mission-specific equipment. The vehicle has bulletproof armour protection and sports all the road-ability characteristics of its BTR-80 prototype.

The uniform chassis has inherited its design from the BTR-80 APC. The height of the hull's middle section has been increased to accommodate extra. The chassis comes in two variants: UNSh-10, with a cupola installed, and UNSh-12, without a cupola. These vehicles have been developed into command, reconnaissance, and medical armoured vehicles, and also into automated missile and artillery fire control systems. Other than the driver, these vehicles are manned depending on their mission and on equipment installed.

In terms of function and location of the vehicle's mechanisms and equipment, it incorporates three compartments: the driving compartment, payload compartment, and engine compartment.

Unlike the BTR-80 armoured personnel carrier, the K1Sh1 does not have weapons, embrasures for firing PKM machine guns, a radio station and an intercom, winch with a drive.

BMM

ARMOURED MEDICAL VEHICLE

BMM is a fully amphibian multipurpose armoured medical vehicle designated for search & rescue operations, medevac missions on the battlefield and in disaster areas, and pre-hospital immediate care in a variety of climates, and can also be used as a mobile dressing ward manned by a medical team.

The BMM armoured medical vehicle stems from the BTR-80 APC and retains its major blocks and assemblies. It can operate in limited access areas at any time of year, day or night.

The vehicle is fitted with communication equipment, NBC protection system, firefighting equipment, bilge pumps, and life support system. Firing ports in the hull are meant for service firearms.

The vehicle comes with a shelter canopy (tent), which can be either set up as an autonomous 5.6 × 3.5 × 2 m tent, or unrolled at the side of the vehicle, forming a separate functional module.

The special BMM equipment includes:

- racks for stretchers with exterior loading device and canopy;
- loader;
- racks and stowage compartments for medical equipment;
- 40-liter potable water tank;
- basin with elbow-operated faucet;
- six-person seat with seatbelts;
- shelter canopy (tent).

SPM-3 VPK-3924 MEDVED SPECIAL POLICE VEHICLE



The SPM-3 VPK-3924 Medved special police vehicle is intended for use as a transporter and an operational vehicle by Ministry of Interior units on counterterrorist operations, riot dispersal operations, territorial defence and assistance to border guard units, including personnel transportation, crew protection from small-arms fire, landmines, IEDs, and toxic agents. The vehicle meets the requirements to MRAP-type vehicles.

The high degree of protection featured by the vehicle, especially its mine protection, allows the vehicle to be used by the Armed Services and other uniformed agencies as an engineer recce squad vehicle, as well as a platform to mount various weapons, command vehicle, etc.

The technical solutions realized in the vehicle ensuring its high consumer properties.

The vehicle is fitted with the unique spaced differentiated armour protection. Ballistic hull protection and armoured glass is compliant with the Level 3 by STANAG 4569 standard. The high level of landmine protection Level 2a/b by STANAG 4569 is ensured by the use of the monocoque hull of a conventional type with the highly-placed crew compartment, V-shaped bottom and multi-layer anti-mine panels.

The 10 m³ crew compartment can freely house eight soldiers in full battle rig and the driver. To fire their service weapons carried in the crew compartment, the personnel can use the side and aft firing ports fitted with armoured shutters. Large wing doors in the rear of the vehicle ensure comfortable boarding and prompt debussing of personnel under the protection of the vehicle.

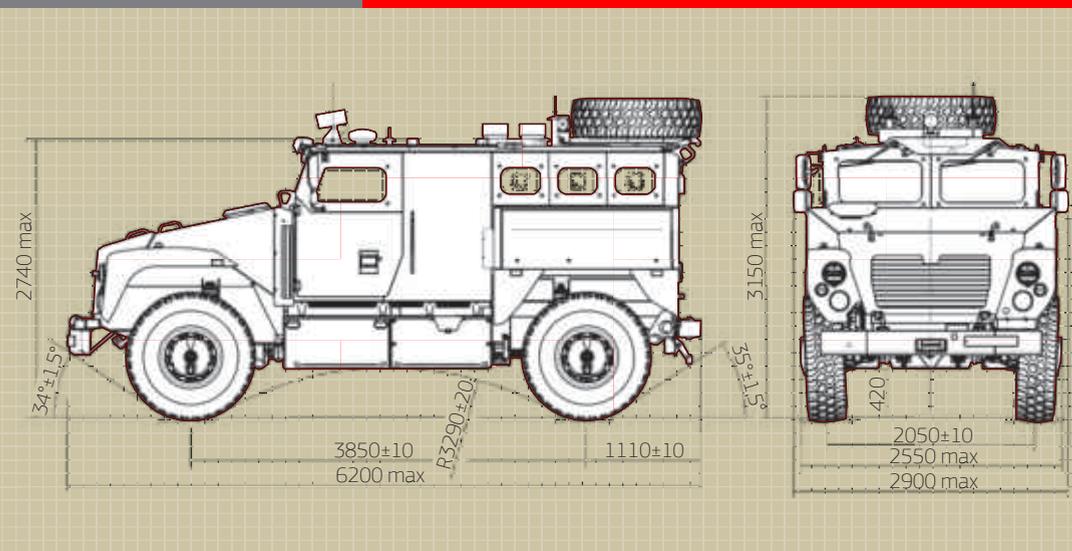
The SPM-3 Medved produces high off-road speed, cross-country capability and smooth drive owing to the 315-hp YaMZ-536 powerful production-standard diesel engine and independent wishbone torsion bar suspension fitted with hydraulic telescopic shock absorbers and transverse stabilizers.

At the customer's request, the SPM-3 Medved can be equipped with a weapon system and various special equipment kits.

BASIC CHARACTERISTICS

Gross vehicle weight, kg	14,000
Number of seats	9
Load capacity, kg	2,200
Dimensions, mm:	
length	6,140
width	2,500
height	2,700
road clearance	500
Engine model and type	YaMZ-536, L6 turbocharged diesel
Max engine power kW (hp)	232 (315)
Max road speed, km/h	not less 100
Fuel endurance, km	1,000
Electric winch pulling force, kgf	6,800

SPM-3 VPK-3924 MEDVED



VPK-URAL

ARMoured MULTIPURPOSE VEHICLE



Developed by the staff of the Military Industrial Company at its discretion and expense, the 4 × 4 VPK-Ural armoured multipurpose vehicle is designed to carry troops and cargo, as well as tow trailers and mount weapons and special equipment providing the required protection level.

A hallmark of the vehicle is the 4 × 4 two-axle Ural-53099 chassis, featuring units and assemblies already proven, produced in quantity and found on Ural military utility trucks. This reduces the price tag, while improving reliability and cutting operational costs. Though, equipped with a rigid-axle spring suspension, the vehicle demonstrated outstanding smoothness in cross-country conditions. It can carry 12 people, driver included, all of them seated in a common armoured hull, providing Level 2 ballistic protection consistent with STANAG 4569. Optionally, the protection class can be enhanced to correspond to Level 3 of STANAG 4569. The interior of the habitable space features a spall liner shielding the personnel from fragments and ricocheting rods penetrating the armour.

The armour package will protect the crew and troops from a 6 kg yield explosive device detonated under the belly or one of the wheels. This is attributed to the vehicle's high clearance and V-bottom design, as well as double floor in the combat compartment and anti-shock seats complete with four-point seat belts for all crew members and troops.

The crew and troops will mount and dismount through four side door and a single-leaf hatch in the rear. In order to facilitate the process of embarkation and disembarkation, the vehicle is equipped with footboards on each side and astern. Inside the vehicle features special attachments for individual weapons. For firing them from the safety of the vehicle's interior, there are four portholes, three astern pointed sideways (two left and one right) and one in the aft windows. The vehicle also features two rectangular hatches in the roof for the same purpose. The lid of the front hatch opens back to let the shooter fire in the front hemisphere.

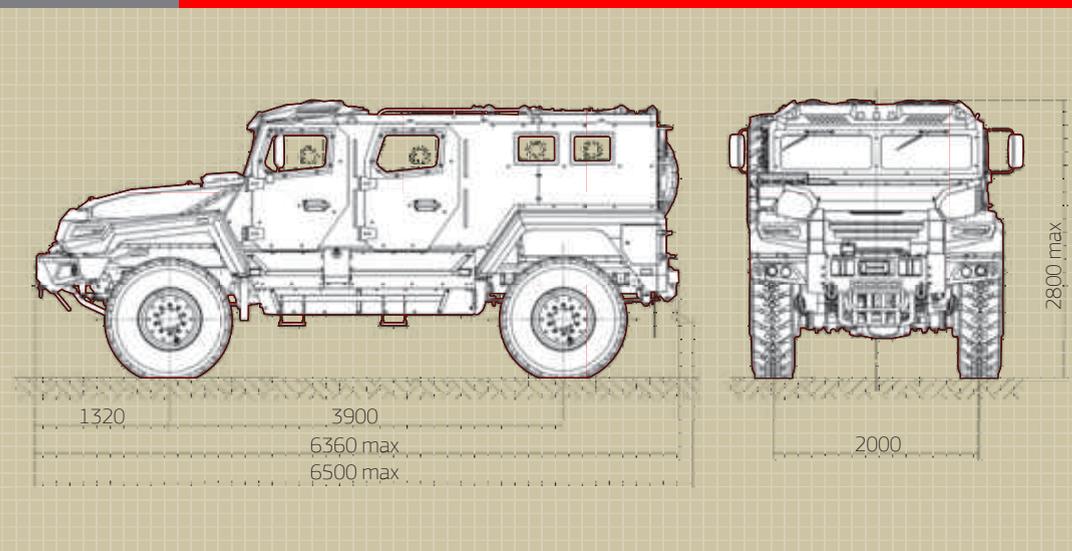
Conversely, the lid of the back hatch opens to the front to let the shooter fire in the back hemisphere. The VPK-Ural is powered by the Russian YaMZ-536 turbodiesel, developing 360 hp. Coupled with an automatic transmission, the engine propels the 14.5 t vehicle to at least 100 km/h on roads.

The large internal armoured space in conjunction with good protection of the vehicle's hull renders it suitable for mounting various weapons and deploying it as a mobile CP, EW, communications, medical platforms, etc.

BASIC CHARACTERISTICS

Gross vehicle weight, kg	14,500
Number of seats	12
Load capacity, kg	2,200
Dimensions, mm:	
length	6,500
width	2,550
height	2,800
road clearance	400
Engine model and type	YaMZ-536, L6 turbocharged diesel
Max engine power kW (hp)	265 (360)
Max road speed, km/h	not less 100
Fuel endurance, km	1,000
Electric winch pulling force, kgf	6,800

VPK-URAL



AMPHIBIOUS ALL-TERRAIN TRACKED VEHICLES



3344-20

We leverage our experience and advanced technologies to offer you a of amphibious all-terrain tracked vehicles (AATV) an absolutely unique and unprecedented family of vehicles unmatched in the off-road segment. Each vehicle in the line-up is tailor-made offering the customer safety and comfort. A wide range of options and attachments considerably expands their area of application. Ergonomic driver compartment with engaging interior design can be made of the most advanced materials. Climate control system and additional noise insulation create comfortable environment inside the vehicle.

The customers may choose any multimedia system with a touch-screen display. Rear view camera and LED running lights are indispensable when driving at night.

Dynamic driving without limits will expand your geography and making any hard-to-reach and fascinating corners of the world real. We offer you to go on a marvelous journey or set off on a major expedition no matter how difficult the road may be.

The 3344-20 tracked two-unit transporter-tractor is designed for transporting personnel with full Arctic ammunition and service weapons, military equipment, towing artillery systems and trailers in combat, material, technical and medical support units of the Armed Forces of the Russian Federation in any climatic conditions.

The two-unit transporter-tractor has the ability to install various small arms and other weapons, special equipment.

The GAZ-34039 Irbis amphibious all-terrain tracked vehicle is a versatile vehicle built for the toughest road conditions and climates to carry people and cargo across country even

**GAZ-34039
Irbis**



GAZ-34039



**GAZ-3409
Bobr**



in the Far North, Siberia and Far East regions. The vehicles are designed for outdoor storage and operation in temperatures ranging from -50°C to +50°C in various road and climatic conditions and on any surface with a low load-bearing capacity — on snow, in sand, swamps and marshes — as well as for crossing water. Waterborne propulsion is provided by the tracks.

An ambulance vehicle was created on the basis of the GAZ-34039 Irbis chassis.

The GAZ-34039 amphibious all-terrain tracked vehicle has a unique cross-country ability on poorly bearing soils, on sand or snow. It is available in various versions, including with a metal passenger or tent cargo-passenger body. The GAZ-34039 AATV can be equipped with tracks with an open metal hinge (resource up to 6,000 km) or with a rubber-metal hinge (resource — 12,000 km).

An ambulance vehicle version was created on the basis of the GAZ-34039 chassis.

The GAZ-3409 Bobr (Beaver) amphibious all-terrain tracked vehicle is a versatile amphibious all-terrain tracked vehicle built for the toughest road conditions and climates to carry people and cargo across country even in the Far North, Siberia and Far East regions. Easy and comfortable steering, sophisticated design, excellent off-road performance, maneuverability and reliability, weather resistance, optimal balance between performance and cost of ownership, outstanding comfort and convenience.

Full-metal welded body with 3 doors, two-seat cab and four-seat passenger compartment. Electric drive windows on the front doors. Rubber-mounted side windows. Sliding side windows in the front and fixed side windows in the rear.

BASIC CHARACTERISTICS

	3344-20	GAZ-34039 Irbis	GAZ-34039	GAZ-3409 Bobr
Gross vehicle weight, kg	11,000	7,000	6,000	4,200
Number of seats	5 + 12	12	12	6
Load capacity, kg	750 + 2,250	2,000	1,500	600
Gross trailer weight, kg	4,000	2,000	2,000	1,300
Dimensions, mm:				
length	9,890	6,280	5,720	4,625
height	2,755	2,620	2,175	2,500
width	2,430	2,550	2,550	2,020
road clearance	not less 350	400	400	430
Average specific ground pressure, kgf/cm ²	0.25	0.22	0.214	0.163
Engine model	YaMZ-5347-26	D245.7E2	D245.12C	Cummins ISF2.8
Engine power, kW (hp)	176 (240)	90 (122)	80 (109)	96 (130)
Max road speed, km/h	50	60	60	63
Max floating speed, km/h	3.8	5	5	5
Fuel endurance, km	450	520	500	700

SERVICE





One of the priority areas of activity of the Military Industrial Company LLC is inextricable link with operating consumer organizations for the entire life cycle of each type of product. The company takes on the tasks of warranty, service and post-warranty service, carrying out improvements, repairs, as well as the modernization of all types and modifications of the vehicles, that were manufactured and continue to be produced at its enterprises, supplying the equipment and spare parts, necessary for these purposes.

The existing research, industrial and material resources and personnel qualifications allow us to successfully meet the needs of customers in the after-sales service of manufactured products during the required period of operation.

The company has the appropriate licenses for the development, production and repair. VPK LLC specialists are ready to provide services for post-warranty service and repair, maintenance of products previously supplied, on the territory of the customer.

Work can be carried out by mobile teams of specialists of the Service Center of VPK LLC, regional offices at points of permanent deployment of equipment in accordance with the operational and repair documentation developed by the manufacturer. In accordance with it, the following types of maintenance and repair are provided:

- maintenance of TO-1 and TO-2 for vehicles of the BTR-80 / 82A families;
- maintenance of TO-10000 (TO-15000) for armoured vehicles of the Tiger family;
- seasonal maintenance when preparing the vehicles for use in winter / summer conditions;
- regulated maintenance (RTO) of armoured personnel carriers;
- current and medium repair (early recovery).



SKD ASSEMBLY MANUFACTURE AT CUSTOMER ENTERPRISES





Taking into account the particularities of the legislation of a number of states in the field of the purchase of military equipment, which necessarily provides for the localization of production and the transfer of necessary technologies, the Military Industrial Company LLC is consistently developing this area of interaction with foreign partners. The capabilities of the enterprises of VPK LLC make it possible in a short time to organize the production of the necessary vehicle sets, their delivery to the customer and subsequent assembly on site at the customer's enterprises. The company has sufficient experience in such cooperation and considers it as a promising area of its activities.

To organize a semi knock down (SKD) assembly, it is necessary to have a premise with a total area of 3—4 thousand sq. m, with the allocation of a warehouse for storing vehicles sets, assembly area (assembly posts), commissioning zone, finished goods warehouse and at least two control posts.

In addition to the premises, it is necessary to have a test track to ensure a test run of 50 km, as well as a laboratory

for road tests and verification of electrical and radio equipment.

To ensure the production process of a semi knock down assembly, necessary communications should be provided, such as power supply 380, 220 and 36 V, distribution of compressed air, supply and exhaust ventilation, water supply and sewerage.

In the existence of the specified equipment, according to the experience of LLC VPK, for example, no more than five eight-hour shifts of an assembly crew of 5—6 people are required to assemble one TIGR armoured vehicle from the vehicle set, to check it, and deliver it to the finished goods warehouse.

In order to possibly reduce prices and minimize costs related to assembling vehicle sets on the territory of the customer, it is possible to use a number of components, both imported and local, such as batteries, tires, electrical components, lighting, interior details, technical fluids and lubricants, paints and varnishes, etc. Moreover, all of them must be previously agreed with the manufacturer and end-users.



FOREIGN ECONOMIC ACTIVITY AND MILITARY TECHNICAL COOPERATION





The Military Industrial Company LLC (VPK LLC) conducts foreign economic activity and military-technical cooperation with other states in strict accordance with Russian law. Despite the difficult international situation, the Company did not limit this activity, but rather expanded it. New partners appeared in the list of foreign customers, the range of products supplied abroad expanded.

This became possible thanks to the competent organization of marketing policy, advertising and exhibition activities and business relations with customers, including potential ones. Openness and moving towards the client have become the main principles in the work of the company's specialists responsible for export deliveries of products. In turn, measures were taken to select, arrange and train the specified specialists of the Company.

The importance of VPK LLC is given to improving the methods of organizing and carrying out advertising and exhibition activities. The Company is rightfully proud of its products and constantly uses the capabilities of various exhibition venues, both in Russia and abroad, to demonstrate its achievements. Since 2006, VPK LLC has been a participant in the largest international exhibitions of armaments and military equipment: Defense services Asia — DSA (Malaysia); Defexpo India (India); Eurosatory (France), International Defense Exhibition — IDEX (UAE), Latin America Aero and Defense — LAAD (Brazil), MILEX (Belarus), International military-technical forum ARMY (Russia) and others. During these representative events, the Company

began to more often demonstrate full-scale models of its products such as armoured personnel carriers and vehicles created on their basis: BTR-80A, BTR-82A, BREM-K, multi-purpose and special armoured vehicles of the TIGR family, SPM-3 Medved, VPK-URAL AMV and others. Repeatedly carried out temporary export of full-scale samples abroad at the request of potential customers to demonstrate their capabilities in specific terrain and climate conditions. This approach allows a potential customer to more fully reveal all the capabilities and characteristics of a particular sample.

Every year, VPK LLC takes part in 5—6 largest international specialized forums and exhibitions, where it demonstrates full-scale samples of its products. In parallel with this, large-scale advertising activities are being organized on the eve, during and after such events. Press releases are being distributed to various media, including foreign ones, Internet resources are being used, local television is being connected, and advertising videos are being shown on the advertising video screens of the exhibition venues.

Military-technical cooperation with other states is carried out by VPK LLC in accordance with Russian legislation through the Federal Service for Military-Technical Cooperation (FSVTS) and Rosoboronexport JSC. Within the framework of such cooperation, the company provides services to its customers in the field of service, warranty and post-warranty service.

The new step carried out by VPK LLC in this area was the creation of joint projects and cooperation with a number of com-

panies from near and far abroad. In the course of such activities, new models of non-military wheeled armoured vehicles are created, which are subsequently supplied to customers.

VPK LLC treats its Clients with attention, striving to simplify the solution of the whole complex of issues related to the operation of the products they purchased as much as possible.

One of the areas carried out for this activity is the training of specialists in the interests of the Customer. For this purpose, the Company's enterprises created a modern educational and material base, developed appropriate training programs, and selected sets of special literature and visual aids, including in various foreign languages. The training process involves highly qualified personnel. This approach, depending on the training program, allows training qualified specialists within two to three months. Based on the experience gained, the level of training of such specialists allows them to independently train new specialists directly at their places.

If necessary, it is possible to organize the training of specialists for foreign customers on their own educational and material basis. This practice has taken place, the learning algorithm has been tested and has been successfully implemented repeatedly.

In recent years, VPK LLC has been developing interaction with various foreign enterprises and companies, as a result of which a number of new projects are being implemented. The Military-Industrial Company is open for dialogue and invites both Russian and foreign companies to mutually beneficial cooperation.

ARMoured INSTALLATION PROTECTION EQUIPMENT



BASIC CHARACTERISTICS

	PP	KCh
Dimensions, mm:		
length	2,057	2,500
width	1,792	2,200
height	2,000	2,900
Weight, kg, not more	2,200	3,500
STANAG 4569 protection Level	1—3	1—3

The Military Industrial Company LLC has developed and produced armoured installation protection equipment, e.g. the PP armoured covering fire station, designed for checkpoints, and KCh sentry cabin in various variants. The two products' designs incorporate solutions that were later tested and operated with success.

The PP armoured covering fire station is designed for use as part of checkpoints set up by units of the Ministry of Interior, Ministry of Defence and other uniformed agencies and for static operation at key and strategic installations.

The PP covering fire station provides all-round observation of the approaches to the installation round the clock surveillance, protection of the personnel inside it from small-arms fire and hand grenade fragments, and giving of the alarm in case of an attack on the installation while ensuring all-round defence.

At the customer's request, the covering fire station can be fitted with various electronics. Depending on missions expected and the customer's request, the roof can be made in one of the three variants: single-piece roof; roof fitted with a traversing platform used on the ASN 233115 TIGR special purpose vehicle, which allows all-round fire by the weapon mounted, the latter being the 7.62 mm PKP Pecheneg machine gun, 12.7 mm KORD machine gun or 30 mm AGS-30 automatic grenade launcher; roof furnished with the BTR-80 turret housing the 14.5 mm KPVT machine gun and coaxial 7.62 mm PKTM machine gun.

The KCh sentry cabin is designed for static operation as part of the guarded perimeters of special, critical and strategic installations. It allows the sentry to perform all-round observation of the avenues of approach to the installation round the clock, protects him from small-arms fire and hand grenade fragments and enables him to give the alarm in case of an attack and fight an all-round defensive battle. Its dimensions, protection class and relevant equipment are determined at the customer's request.

The standard configuration of the KCh sentry cabin includes four flood lights to illuminate the installation under reduced visibility conditions, telephone, heater, internal lights and ventilation system.