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## RUSSIAN BMPS: QUALITY ABOVE ALL

Back in the middle of the last century the first infantry fighting vehicles appeared in the armies of different countries of the world. Among them there was the famous BMP-1 produced by Kurganmashzavod JSC. Today Kurganmashzavod JSC holds fast its leading position of designer and producer of light armoured tracked vehicles in the Russian military industry. Russian infantry fighting vehicles BMP-1, BMP-2 and BMP-3 produced by Kurganmashzavod JSC and also the vehicles designed on their basis are well known all over the world. Excellent combat efficiency, quality and reliability of Kurganmashzavod JSC military products are proved by their successful employment in wars and local conflicts and also by numerous export deliveries to about 30 different countries.

The BMP-3 infantry fighting vehicle of the last generation is considered to be one of the best in its class. It is characterized by high performance, superior fire power, good protection and excellent mobility. The BMP-3 IFV has no analogues among modern wheeled and tracked armoured vehicles. It can operate in any climatic zone: desert, tropics and mountainous areas within the temperature range from -50 up to +50 degrees. The vehicle is very easy in operation. Besides, easy maintenance enables to repair most of the vehicle units and assemblies in battlefield conditions, using the on-board SPTA set.

Impressive fire power is ensured by the unique armament system (a 100-mm gun-launcher, a 30-mm automatic cannon and three 7.62-mm machine-guns), an automated fire control system and munitions of enhanced lethality. The vehicle is able to fight against different types of ground and aerial targets: against MBTs and aerial targets - with ATGMs of the last generation using 100-mm gun-launcher, against vehicles of the same type and low-flying targets - using 30-mm automatic cannon.



*BMP-3 IFV with the Shkva protection system*

The destruction of the enemy manpower is assured due to employment of the whole armament system, including HE projectiles for 100-mm gun and 30-mm cannon as well as employment of machine-guns. BMP-3 IFV features excellent strategic and operational mobility. The vehicle can be transported by railway-, by air- and sea-transport. It features outstanding cross-country capabilities, high average speed on highways and unpaved roads and perfect floatability (up to Sea State 3). The BMP-3F marines fighting vehicle was designed on the basis of standard BMP-3 IFV. It was specially modified for operation both at sea and on ground. It is designed for equipping the special operation forces and marines units, employed without direct support of friendly troops on the hostile territory and in the coastal or insular areas. Moreover, the BMP-3F vehicle features a number of alterations to improve its floatability, stability and protection, contributes to its mobility and lethality increase. The BMP-3F two water jets ensure movement afloat with the speed of 10 km/h, providing easy control

and operation. The telescopic air-intake tube and antisurge vanes ensure steady moving afloat at Sea State 3 and aimed fire at Sea State 2, as well as coming out to the coast at heavy surf-wave conditions. The possibility for the vehicle to stay afloat permanently for 7 hours with the engine running ensures safety and reliable operation in different combat missions at sea. One more peculiarity of the BMP-3F operation at sea is its capability to tow the same-type vehicle or to be towed by the BMP-vehicle or sea boats.

The unique multipurpose BMP-3 chassis with great payload and excellent mobility is the basis for a number of derivatives such as BMP-3K command post IFV, BMP-3F marines fighting vehicle, BRM-3K "Rys" command combat reconnaissance vehicle, BREM-L armoured recovery and repair vehicle, "Khrizantema" multipurpose missile system, "Vena" 120-mm self-propelled gun, "Kornet" anti-tank guided missile system.

Nevertheless, manufacturer of these superior vehicles always generates new ideas to make their characteristics even better. The

comprehensive BMP-3 upgrade package, developed by the vehicle manufacturer Kurganmashzavod JSC, is aimed at enhancement of all performance characteristics of the vehicle, including the vehicle mobility. Installation of a new UTD-32T turbocharged engine (660 hp) with its systems increases the vehicle specific power and the average speed of movement on unpaved roads. The vehicle can be equipped with automatic gear selector (APP-688) and new universal driver's vision device (TVK-1).

The BMP-3 IFV features high protection level, which is achieved due to application of hull aluminum armor, optimal spatial arrangement of armor elements, low silhouette of the vehicle and camouflage facilities. But frequent participation in numerous combat missions has revealed the new requirements to the vehicle protection against high precision weapons as well as against "common" threats.

Widespread employment of ATGMs caused installation of "Shtora-1" protection system to the BMP-3 IFV. The system misleads the homing of the offensive ammunition by setting optical interference. Also the auxiliary volumetric armour shields can be installed to the BMP-3 IFV to improve its ballistic protection against 12.7-mm armour-piercing bullets from 150 m distance. One more way to improve the protection level is the installation of ERA, which covers the frontal and lateral projection of the vehicle.

Enhancement of lethality level improves the combat capabilities of the BMP-3 vehicle. Efficiency of the vehicle unique armament system is increased after installation of a new fire control system,



BMP-3 IFV



Khryzantema missile system on the basis of the BMP-3 chassis

employment of new munitions and ATGM loading mechanism. New main gunner's sight (SOZH-M) with integrated laser range finder and missiles control channel, Vesna-K sighting system with thermal imaging camera and automatic target tracker (AST-B) ensure both increase of target detection/identification range and target engagement with the first shot at day or nighttime. The searching capabilities are improved due to introduction of a new commander's observation device (TKN-AI) with active pulse illumination.

The upgraded BMP-3 IFV ammunition allowance can include new 100-mm HEF and 30-mm APDS rounds as well as new ATGM missile. The fragmentation effect of 100-mm HEF projectiles and the penetration effect of 30-mm APDS projectiles are increased. The new ATGM with tandem warhead features increased range and penetration capability, including ERA penetration.

Intensity of contemporary combat operations, high level of workload and possibility to employ the BMP-3 vehicle in different climatic zones with the temperature range from  $-50^{\circ}\text{C}$  up to  $+50^{\circ}\text{C}$  have caused the improvement of ergonomic features of the vehi-

cle. Air conditioner KBM-3M ensures improvement of living conditions for the crew and provides comfort at ambient temperature  $+50^{\circ}\text{C}$  for a long time. Smoke extraction system of the fighting compartment is designed to improve operation conditions of the crew by removing powder fumes from the compartment and reducing carbon oxide concentration. Employment of Chassis informational control system or Electronic assistant for the crew (EPVO) increases operational reliability of the vehicle and prevents emergency situations.

Kurganmashzavod JSC is ready to offer its customers cooperation in the whole scope of works starting with joint R&D work in order to design and manufacture customer-tailored modification of the vehicle to the very delivery of both standard and upgraded BMP vehicles. The enterprise offers comprehensive delivery approach, including warranty and post-warranty services, spare parts supply, repair (including overhaul) and upgrading of previously supplied vehicles. There is also opportunity to train the customers specialists in operating and maintaining the BMP-3 vehicle. Kurganmashzavod JSC guarantees quality, reliability and timely logistics support.

For more information please check  
[www.kurganmash.ru](http://www.kurganmash.ru)