

TETRAEDR IN THE AREA OF DEFENCE INDUSTRY

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he Belarusian Scientific and Industrial Private Unitary Enterprise TETRAEDR celebrates its 10th anniversary this year. The enterprise, founded on 26 April 2001, specializes in developing and manufacturing advanced

radio-electronic weapon systems, hardware and software used in radar and radio-electronic control systems, as well as upgrading surface-to-air missile (SAM) systems.

The basis for the TETRAEDR's activities are the in-house developments, with one of them being the project of upgrading the S-125 PECHORA SAM system to the level of the S-125-2TM PECHORA-2TM, offered to foreign customers since 2006.

Employment of the new missile guidance methods, new radar signal processing principles, modern electro-optical system and other technologies developed by TETRAEDR has resulted in providing a SAM system meeting the up-to-date requirements on combat effectiveness, jamming immunity, operation reliability and ergonomics.

The S-125-2TM PECHORA-2TM SAM system has a substantially improved performance. The new system is capable of destructing modern small-size targets flying at a speed of up to 900 m/s at a range of up to 36 km at altitudes between 0.02 km and 25 km. It features a single shot kill probability of 0.92, jamming immunity of 2,700 W/MHz and displacement/emplacement time of no more than 25 minutes. The missile guidance radar enables the SAM system to engage two targets simultaneously.

Further development of the OSA-1T SAM system upgrade project has resulted in a new independent project – the T38 STILET short-range SAM system designed to defend Army units, industrial and military installations from the strikes of modern and advanced aerial attack assets with the radar cross-section (RCS) of 0.03 m² and more, flying nap-of-the earth, at low and medium altitudes.

The T38 STILET SAM system features the ability to fire both the 9M33M2(3) SAM, manufactured earlier, and the new T382 SAM being developed by TETRAEDR.

The equipment and eight missiles are accommodated on the MZKT-69222T wheeled chassis fitted with a powerful diesel engine, navigation, topographic positioning, life support, communications and power supply systems.

The target destruction range of the T38 STILET SAM system, when firing the new T382 missile, is 20 km and the maximum target destruction altitude is 10 km. The new SAM system is able to destruct targets flying at a speed of up to 900 m/s with a kill probability of 0.9. The service life of the new T382 SAM is 25 years.

The first five live firings of the T38 STILET SAM system using the 9M33M3 missiles were conducted at the 174th training fire range of the Air Force and Air Defence of the MoD of the Republic of Belarus in Domanovo in October 2010. All five targets including two high-speed IVTs-M1 targets were destroyed.

The R&D works carried out on TETRAEDR's own initiative have resulted in developing the A3 Multipurpose Missile and Gun System (anti-air, anti-armor, anti-terrorism) designed to defend various administrative, industrial and military installations against all types of contemporary and future aircraft, helicopters,



● T38 STILET SAM system (IDEX-2011, Abu Dhabi, United Arab Emirates)



● S-125-2TM PECHORA-2TM SAM system safeguards the state's aerial border-line

unmanned aerial vehicles (UAV) and precision guided munitions (guided missiles and aerial bombs). In addition to solving air defence tasks the A3 system can also be employed to fight enemy personnel and ground armoured targets (main battle tanks, infantry fighting vehicles, armored personal carriers) as well as solve anti-terrorist tasks.

TETRAEDR also upgrades the P-18 radar to the level of the P-18T/TRS-2D. The radar is employed to detect and track all types of modern and future aircraft within the entire range of altitudes. The TRS-2D radar can be integrated in any air defence system including air traffic control systems. It can also be used for guidance of fighter aircraft as well as surveillance and target designation for SAM systems.

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