



PoCTeX

Rostec for the first time demonstrates operative exoskeletons for the new generation of the Ratnik combat suit

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Press release

Rostec is presenting exoskeletons for promising combat suits at the International Military-Technical Forum ARMY 2018. The exoskeletons were already tested by the Russian Army under combat environment conditions. The development displayed high efficiency.

A fully operative example of a passive exoskeleton significantly increases physical abilities of a soldier, protects joints and the spine and can be adjusted to the height of a particular soldier. The exoskeletons are developed by TSNITOCHMASH (the Central Research Institute for Precision Machine Building, part of Rostec State Corporation) and GB Engineering.

The exoskeleton is made of lightweight carbon fiber and supports the musculoskeletal system when a person carries weights up to 50 kg (packs, special gear, armaments and ammunition) during long marches and assaults. It is a mechanical device with levers and swivels in the shape of human joints.

Unlike active exoskeletons, the passive exoskeleton has no power sources, servomotors, electronics and various sensors. This makes it more reliable and light (4 to 8 kg depending on the configuration). It is absolutely autonomous, and easy to maintain.

"This prototype has already been tested during real military operations. The exoskeleton was tested by special detachments of the Russian Ministry of Defense and Internal Affairs bodies in years 2017-2018. In addition, an active exoskeleton is also being designed, and its working prototype has already been made by Rostec's enterprise. It is going to be presented at one of the nearest exhibitions," says Industrial Director of the Armament Cluster of Rostec **Sergey Abramov**.

Rostec Corporation is a Russian corporation that was established in 2007 to facilitate the development, production and export of high-tech industrial products designed for civilian and military applications. The Corporation comprises over 700 organizations that are currently part of eleven holding companies operating in the military-industrial complex and four holding companies working in civilian industry, as well as over 80 directly managed organizations. Rostec's portfolio includes well-known brands such as AVTOVAZ, KAMAZ, Concern Kalashnikov, Russian Helicopters, UralVagonZavod, etc. Rostec companies are located in 60 constituent entities of the Russian Federation and supply products to the markets of more than 100 countries. In 2017 the consolidated revenue of Rostec reached 1 trillion 589 billion rubles, while the consolidated net income and EBITDA amounted to 121 and 305 billion rubles respectively. In 2017 the average salary in the Corporation was 46 thousand rubles. According to Rostec's strategy, the main objective of the



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Corporation is to ensure that Russia has a technological advantage in highly competitive global markets. Rostec's key objectives include the introduction of a new techno-economic paradigm and digitalization of Russian economy.

TSNIITOCHMASH forms part of Rostec State Corporation as a directly managed organization. It develops and produces armaments and military equipment for various types of military forces. Under the supervision of TSNIITOCHMASH, over 150 units and complexes of small arms, artillery, anti-tank weapons, military equipment and various types of cartridges have been developed, and their serial production started. They have been handed over to ground troops, paratroopers, air force, the navy and special units of law enforcement agencies.