Press release

Eurosatory 2024: RENK sets new standards in drivetrain technology for armored vehicles with ATREX

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Paris, June 17, 2024 – RENK Group AG, a leading manufacturer of drive solutions for the military and civilian sectors, is presenting the ATREX transmission system for the first time at Eurosatory 2024 in Paris. ATREX is the world's first hybrid transmission system designed for main battle tanks. RENK is thus demonstrating how the increasing requirements of modern land forces in the areas of alternative driveline, fuel efficiency, digitalization and autonomous driving can already be met today.

"RENK is a 'Trusted Partner' for land forces in the field of mobility. We have been a global leader in high-performance gear units for over 150 years. With the ATREX hybrid system, we are building on this tradition" says Susanne Wiegand, CEO of RENK Group AG. "At the same time, ATREX complements our portfolio of transmissions, engines, dampers, suspension systems and components for hybrid drives. The necessary technological know-how, development and design expertise are unified under the one roof of the RENK Group and come from a single source. This allows us to think about the future of armored mobility in an integrated way."

Increased fuel efficiency, operational range and availability

The acronym ATREX stands for "**A**dvanced **T**ransmission **E**lectric Cross(**X**) Drive with Drive-by-Wire". With the combination of proven transmission technology and innovative new developments, RENK is setting a milestone in drivetrain technology for military tracked vehicles. The brake and propulsion system as well as the electric motors of the ATREX are all based on reliable RENK technology. The core innovation is a new type of electro-mechanical steering system, which can also be used as an electrical propulsion system and for power generation. ATREX supports a combined output of 1,400 to 1,500 kW, of which 350 kW can be provided by the electric drives.

ATREX helps to save fuel and extends the operational radius of vehicles. Idle times can be reduced and the diesel engine can be more efficiently utilized. For short distances, the electric drive can be used instead of starting the diesel engine. Another advantage of the ATREX is its advanced recuperation system, which recharges the battery during braking manoeuvres. The reduced use of the diesel engine also means that fewer maintenance cycles are required for the diesel engine. The logistical effort involved in refuelling is reduced, vehicle availability is increased and combat readiness is increased.

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New functions for more passive protection and tactical advantages

In addition, ATREX enables new functions such as extended Silent Watch, Silent Manoeuvring and Sprint Boost, which increase the passive protection of land forces and at the same time provides tactical advantages. Thanks to the battery, the vehicle can be used for low-noise and low-heat signature missions independently of the diesel engine. If a critical situation occurs during this time, it is possible to use the boost function to move the vehicle quickly out of the danger zone using electrical energy, with the diesel engine starting at the same time. The electro-mechanical steering system can be used as a generator to recharge the battery.

ATREX paves the way for autonomous driving

ATREX also enables digital networking with the entire drivetrain and other vehicle components, such as the suspension or the track tensioning system. Equipped with Drive-by-Wire technology, it allows for flexible driver stations, supports driver assistance systems and paves the way for autonomous driving. “ATREX provides the digital networking capabilities that are essential for future military tracked vehicles. Modern technologies such as those offered by ATREX ensure that vehicles are always ready for the mission”, emphasizes Dr. Alexander Sagel, Chief Operation Officer of RENK Group AG. “ATREX is therefore a forward-looking answer to the strategically important question in the military sector of the optimum balance between mobility, combat effect and protection.”

Customized development and integration into the platform

ATREX is a scalable system in terms of size and weight and can be adapted to individual customer requirements. The arrangement of the electric motors on the outside of the propulsion system makes it easy to modify the installed electrical power to meet specific customer requirements. Further development and integration into the platform is carried out in close collaboration with the customer.

Additionally, with the Next Generation Mobility System, RENK is showcasing the configuration of an ATREX propulsion system for a future battle tank at Eurosatory 2024. The exhibit demonstrates the interaction of the ATREX with InArm® suspension and Track Tensioner components as well as the Active Damping, Ride Height Control and Drive-by-Wire systems in one platform.

About RENK Group AG

Headquartered in Augsburg, Germany, RENK Group AG is a globally leading manufacturer of mission-critical drive solutions across diverse military and civil end markets. Our product portfolio includes gear units, transmissions, power-packs, hybrid propulsion systems, suspension systems, slide bearings, couplings & clutches and test systems. With this broad product portfolio RENK Group AG serves in particular customers in industries for military vehicles, naval, civil marine, and industrial applications focused on energy. In the fiscal year 2023, RENK Group AG generated revenue of EUR 926 million.

For further information, please visit www.renk.com