

► DIVISION WEAPON AND AMMUNITION

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A new member in the family: Rheinmetall Mission Master XT, an extreme terrain autonomous UGV

Rheinmetall proudly announces the release of the Mission Master XT, the latest member of its successful Mission Master family of Autonomous Unmanned Ground Vehicles (A-UGVs). Unlike the Mission Master SP platform, which is already introduced to the market, the Mission Master XT has a diesel-powered engine. Responding to a new set of needs, the Rheinmetall Mission Master XT is highly mobile even in the toughest terrain and capable of carrying impressive payloads. The Mission Master XT was developed by Rheinmetall Canada.

A true companion when the going gets tough

The Rheinmetall Mission Master XT thrives in extreme terrain. It easily tackles ice, snow, and sub-zero weather conditions, as well as sandy, rocky and mountainous topography. Its advanced amphibious capabilities allow it to float and swim while maintaining its full payload capacity. Weighing in at 2217 kg, this powerful A-UGV can carry a 1000 kg payload in all scenarios, allowing troops to transport special equipment to hard-to-reach locations. The diesel-powered engine allows it to travel 750 km without refuelling, while lithium-ion batteries enable up to 6 hours of silent watch operations.

Another remarkable feature of the Rheinmetall Mission Master XT is its continuous tire inflation system, which adjusts the tire pressure as needed based on the terrain. Featuring high endurance and survivability, the A-UGV keeps moving on even with 2 cm-holes in the tires.



Autonomous, intelligent and easy to control

Like the other platforms in the Rheinmetall Mission Master family, the Mission Master XT is optimized to take on dull, dirty and dangerous tasks, allowing soldiers to focus on their core missions more effectively and in greater safety. It is driven by Rheinmetall PATH, a proven autonomy kit (A-kit) that enables a wide range of autonomous driving and navigation capabilities.

The Mission Master family is fully compatible with NATO-standard battle management systems and can be controlled through a variety of teleoperation options. "The most multifunctional of these is a smart tablet developed by Rheinmetall, which allows the operator to control any Mission Master platform

► Key facts



- New Rheinmetall Mission Master XT autonomous platform
- Diesel-powered engine and 750 km range
- Extreme-terrain mobility and heavy payload transport capabilities
- Amphibious operations even at full payload
- Long-range autonomy and high survivability
- All platforms and modules controlled through a single interface
- Driven by the proven Rheinmetall PATH autonomy kit

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and payload through a single interface, a first for the market”, explains Alain Tremblay, Vice-President of Business Development and Innovation at Rheinmetall Canada. “For instance, users can monitor camera feeds or direct a weapon station, then quickly program the platform to navigate itself autonomously to a desired location, all from the same device”, adds Mr Tremblay.

If necessary, this robust, tried-and-tested mechanical platform can operate in manned configuration, with an integrated joystick and emergency seat.

Multi-mission capabilities

Thanks to its modularity, the Rheinmetall Mission Master XT can take on multiple missions in any situation. The scope of activities the A-UGV can conduct includes logistic transport, surveillance, fire support, rescue, medical evacuation, CBRN detection, communication relay and a multitude of other client-specific requirements. Rheinmetall is committed to maximum operational safety at all times, keeping a human in the loop in all kinetic operations.

A powerful component of Joint All Domain Operations

As enemy capabilities become increasingly advanced, the ability to quickly leverage large amounts of data in order to make informed decisions in the field is more critical than ever. Foreseeable force deployments are likely to take the form of multinational Joint All Domain Operations (JADO) that encompass every dimension of the modern battlefield: land, air, sea, cyber and information space as well as outer space.

Just like the other members of Rheinmetall’s Mission Master family the new Mission Master XT features a unique NATO standard battle management system (BMS) integrated into every platform. This allows each system to process large amount of tactical data. The Mission Master XT thus becomes an integral member of the tactical combat team able to share and exchange information from its vehicle and module sensors to improve the team's common operating picture. The BMS also uses information in the network from other contributors to improve its own situational awareness with regard to terrain as well as the location of friendly and enemy forces. The built-in BMS allows many Mission Master platforms to operate as an UGV team when carrying out standard military missions in direct support of troops on the ground.

Finally, the Mission Master XT will also benefit from the systematic integration of new artificial intelligence applications, allowing it to evolve and continue contributing to successful outcomes in the complex JADO battlespace of tomorrow.

Renaming of the existing Mission Master

To make room for the newcomers in the Mission Master family, the existing Mission Master platform now becomes the Rheinmetall Mission Master SP. Named for its role as “silent partner”, the Mission Master SP remains an invaluable asset for dismounted troops in a wide range of missions, including high-risk situations.