

► DIVISION WEAPON AND AMMUNITION

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## Another success for the Mission Master SP: Rheinmetall wins bid for Spiral 3 of UK's Robotic Platoon Vehicles Programme

For the third time, the British Ministry of Defence has awarded Rheinmetall a contract for its Robotic Platoon Vehicles (RPV) programme. The RPV programme is a three-phase experiment to determine the extent to which unmanned vehicles can boost the combat effectiveness and capabilities of dismounted troops at platoon level. For Spiral 3, the programme's final phase, the British once again chose to work with Rheinmetall Canada.

The British Army ordered four Rheinmetall Mission Master SP – Surveillance Autonomous Unmanned Ground Vehicles (A-UGV) in an Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) configuration and three Rheinmetall Mission Master SP – Cargo vehicles, for a total of seven new A-UGVs. The UK had procured a total of eight Mission Master vehicles in previous phases of the programme. The Rheinmetall Mission Master SP is part of the Autonomous Unmanned Ground Vehicle (A-UGV) family developed by Rheinmetall Canada.

The new order, placed in January 2022, is scheduled to be fully delivered by the end of August of this year. It includes comprehensive training, support services, and spare parts. Rheinmetall Canada is the prime contractor, working in cooperation with Rheinmetall Provectus, its Ottawa-based robotics branch.

The Mission Master SP is a low-profile A-UGV designed to stealthily follow soldiers anywhere. Agile and highly transportable, the Mission Master SP has a low-signature electric motor, silent drive mode, and compact profile to escape detection under threat. Like all members of the Mission Master family of A-UGVs, the Mission Master SP is powered by the PATH autonomy kit (A-kit). This proven, agnostic, trusted, and autonomous suite of advanced sensors and perception algorithms enables the Mission Master to find the safest routes through dangerous environments and challenging terrain, and to complete its missions seamlessly.

The Mission Master SP – Surveillance comes equipped with an ISTAR payload. This module supports forward and last-mile resupply missions, performs silent watch operations, and carries payloads. Built to optimize situational awareness, the



## ► Key facts

- British Army chooses once again to cooperate with Rheinmetall Canada for Spiral 3, the Robotic Platoon Vehicles programme's final phase
- A total of seven Rheinmetall Mission Master SP A-UGV ordered: four ISTAR and three Cargo variants
- A true force multiplier
- Rheinmetall intends to continue cooperation at the UK's newly formed Expeditionary Robotic Centre of Expertise

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ISTAR module's array of sensors can be easily swapped depending on mission objectives. These sensors provide leading-edge target detection, recognition, and identification at long ranges, regardless of weather and lighting conditions. They also facilitate early warning and identification of chemical threats in the event of a chemical warfare.

The ISTAR module is fitted on top of an improved version of the Mission Master SP vehicle. Feedbacks from customers and lessons learned from trials have been the main drivers for these improvements. For instance, the drivetrain and frame are more rugged and more accessible to ease maintenance operations. In addition, the Mission Master SP platform now includes a diesel generator that can be used on extended missions.

The Mission Master SP – Cargo, for its part, reduces soldiers' combat load, hence improving mobility and efficiency. The robust A-UGV can transport supplies, tactical kits, and medical equipment either independently, in follow-me mode, or in convoy mode with other Mission Master vehicles.

Now the owner of several Mission Master vehicles and modules, the British Army possesses a true force multiplier that can be harnessed for more complex experimentation, especially related to Rheinmetall's wolf pack (swarm) concept.

The wolf pack consists of a team of Mission Master vehicles working together to accomplish missions ranging from surveillance to target position transfer and slew-to-cue. The units communicate with each other using their advanced artificial intelligence capabilities to maintain rich situational awareness. The wolf pack is remotely managed by a single operator, who is thereby able to focus on a successful mission outcome rather than on individual UGV tasks. This unique capability is enabled by the Rheinmetall Command and Control Software.

Rheinmetall Canada's successful bid for Spiral 3 demonstrates further proof of the British Army's trust in the Canada-based branch of the Rheinmetall group, one of Europe's leading defence suppliers. The contract was awarded following a request for tenders in which Rheinmetall ranked exceptionally high.

While the delivery of Spiral 3 will mark the end of the RPV Programme, Rheinmetall Canada intends to continue its involvement in the UK's experimentation with robotic vehicles at the newly formed Expeditionary Robotic Centre of Expertise (ERCoE).