

MINING & QUARRY WORLD





Orica celebrates over 10,000 blasts with the WebGen™ wireless initiating system

Orica is proud to announce that its groundbreaking WebGen™ technology has reached a significant milestone, achieving 10,000 blasts globally and firing 200,000 WebGen™ 200 primers. This milestone reflects the rapid adoption and success of WebGen™ in the mining industry.

WebGen™ is the world's first truly wireless initiating system, communicating through rock, air, and water to initiate blasts reliably and safely. This groundbreaking technology eliminates the need for down-lines and surface connecting wires, significantly enhancing safety by removing people from hazardous areas. WebGen uses low-frequency magnetic waves to communicate with each primer, ensuring precise and controlled blasting operations.

Dr. Rodney Williams, Vice President Initiating Systems, commented on the recent milestone: "This achievement highlights the widespread adoption of WebGen technology, enabling our customers to implement new mining methods and achieve real-world benefits."

The journey of WebGen™ technology has been marked by innovation and rapid adoption. It all began with WebGen™ 100, which entered alpha trials in February 2015. This pioneering product saw its first commercial blasts at a gold mine in Canada in July 2017. Over the years, WebGen™ 100 made its mark in the industry, achieving a milestone of 100,000 units fired by May 2022. Its final deployment has just commenced at a zinc mine in Europe, with blasting to be completed this month, marking the end of an era as it is phased out.

Building on the foundation laid by its predecessor, WebGen™ 200 experienced swift market acceptance. Its first alpha blasts were fired at a mine in Canada in May 2021, leading to its first commercial firing at a gold mine in Canada in October 2022. By April 2024, WebGen™ 200 had already reached 100,000 units fired.

The WebGen™ 200 range, including WebGen™ 200 Surface, WebGen™ 200 Surface Pro, WebGen™ 200 Underground Pro, and WebGen™ 200 Dev, has set a new standard in the mining industry. Each variant is designed to meet specific operational needs, with WebGen™ 200 Dev being a key enabler of Orica's journey to automation. Underpinned by WebGen™ wireless initiation system and Epiroc's Boomer M2C carrier, the Avatel™ system is a complete mechanised development charging solution that offers full control over blast energy from design through to execution. The system enhances safety by allowing operators to charge explosives remotely from an enclosed cabin, reducing exposure to hazardous areas.

WebGen™ has seen significant usage across various regions, including North America, LATAM, AusPac, Asia, and EMEA, with notable growth in LATAM, the Western Australia Goldfields region and Indonesian operations. "WebGen's success is a testament to the dedication and innovation of our team and customers," said Rodney. "We look forward to continuing this journey and achieving even greater milestones together with our customers."

WEBGEN™ REAL WORLD BENEFITS - KEY CASE STUDIES

WebGen™ wireless technology uses low-frequency magnetic induction signals to communicate with primers in blastholes, enhancing safety by preventing accidental detonations from lightning strikes and eliminating interactions with surface connectors. This system has been implemented at over 75 sites across six continents and 13 countries, streamlining the blasting process and allowing for more efficient and precise blast designs.

The success of WebGen™ technology is exemplified by several key case studies:

- Musselwhite Gold Mine, Canada: The implementation of WebGen™ technology at this site led to a 15% increase in ore recovery and a 10% reduction in blasting costs.



WebGen™ 200

The mine also reported improved safety conditions due to the wireless initiation system.

- New Afton Copper and Gold Mine, Canada: WebGen™ enabled safer undercutting in block caving operations, reducing slot drive development by eight meters per drive. This resulted in estimated development cost savings of more than \$1 million CAD across 18 undercut drives.
- Kemi Zinc Mine, Europe: The adoption of WebGen™ technology facilitated the transition to more advanced mining methods, leading to a 92% increase in ore recovery and an 80% increase in the total mined volume of the stope. The mine also achieved a notable reduction in waste mined.
- Boddington Gold Mine, Australia: WebGen™ technology provided enhanced mine schedule flexibility, allowing for more efficient resource allocation and improved overall productivity.
- Sierrita Copper Mine, USA: The use of WebGen™ technology at this site resulted in significant operational improvements, including increased precision in blasting and reduced environmental impact.
- Kinross Paracatu Gold Mine, Brazil: WebGen™ technology contributed to the mine's social responsibility initiatives by reducing the environmental footprint and enhancing community relations through safer and more efficient blasting practices.
- Grasberg Copper and Gold Mine, Indonesia: WebGen™ 200 enabled more precise blasting operations, resulting in a 20% increase in productivity and a significant reduction in environmental impact. The mine also experienced fewer delays and increased operational efficiency.
- Tara Zinc Mine, Europe: The adoption of WebGen™ technology facilitated the transition to more advanced

mining methods, leading to a 25% improvement in overall mine performance. The mine also achieved a notable reduction in downtime and maintenance costs.

- Agnico Eagle's Kittilä Mine, Finland: The implementation of Orica's Avatel system, which integrates WebGen™ wireless initiation technology with Epiroc's Boomer M2C carrier, significantly enhanced safety, and operational efficiency. By allowing operators to charge explosives remotely from an enclosed cabin, the mine reduced exposure to hazardous areas, leading to a 30% improvement in safety metrics and a 15% increase in overall productivity.

WebGen™ has revolutionised not just blasting but mining also and now that customers are realising the value unlocked by not having a physical connection to the blast, they are turning their attention to how they plan mines of the future around the WebGen™ Technology. These partnerships provide us a privileged insight into our customers' needs and guide our development pipeline. Therefore, we will see feature releases and technology enhancements steadily rolled out for years to come.

