




RME AutoMotion


RME AutoMotion is a highly advanced semi-automated control system that provides remote operation functionality for the industry's most trusted and proven RUSSELL 7 Mill Relining Machines*. This world-first capability cooperates with RME INSIDEOUT Technologies to achieve a step-change improvement in safety by enabling relining to be performed in entirety from outside the mill. Moreover, *AutoMotion* can execute liner exchange with a speed, precision and consistency that surpasses conventional operator efforts, resulting in higher relining productivity and mill availability.



BENEFITS

- The world's safest method for liner removal and placement
- Eliminates the need for reline crews to be inside the hazardous mill during relining
- Minimises process variability because of operator skill, performance, fatigue
- Controls multiple movement functions concurrently, exceeding best human operator performance
- Optimises liner movement paths for the shortest travel routes and faster liner exchange
- Improves machine performance, minimising stress, wear and tear and extending asset life
- Prevents accidental damage to plant and equipment from rough use and misuse
- Proven to reduce reline duration and improve mill availability



RME's approach to automating mill relining is focused on safety at every step. First, we take established technologies and future-proof them with automation capabilities. Second, we take a systems approach to ensure no new risks are introduced inside and outside the mill. Third, we've developed a supported incremental implementation program which delivers safety and productivity uplift at every reline, even as the technology is being deployed. RME Customers know that *AutoMotion*, and its integration with the surrounding processes, is fast, reliable and safe for reline crews. 

John Russell

Founder, Executive Chairman and Chief Engineer
RUSSELL MINERAL EQUIPMENT

INTEGRATION READY

RUSSELL 7 Model S, S+ and R • THUNDERBOLT SKYWAY
▪ THUNDERBOLT SKYPORT ▪ RUSSELL Elevating
Platforms ▪ RME BOLTBOSS Liner Bolt Retention System
▪ RUSSELL CLAW ▪ RUSSELL Safety Products

RME is the world's leading Original Equipment Manufacturer (OEM) of mill relining systems.



440+

Mine sites served by RME equipment and services.

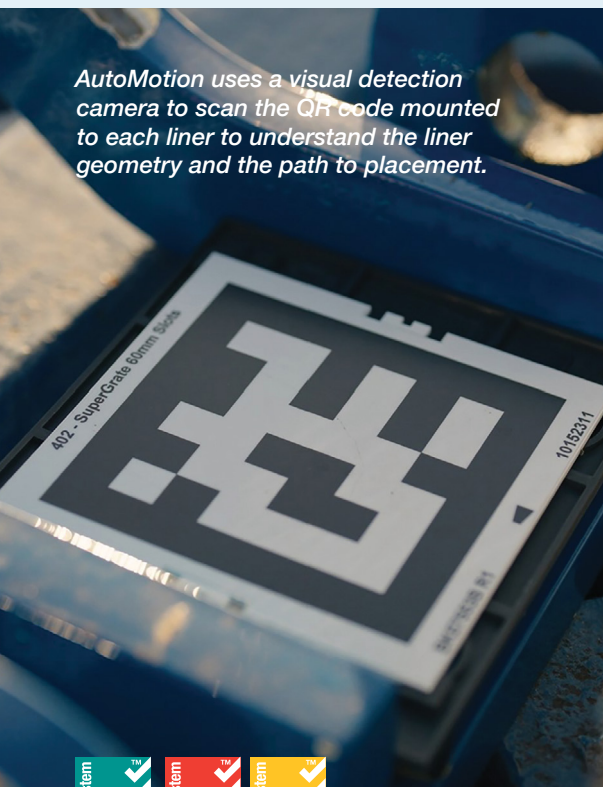


550+

RUSSELL MRMs engineered, manufactured and delivered.



AutoMotion allows relining to be completed from outside the mill.



AutoMotion uses a visual detection camera to scan the QR code mounted to each liner to understand the liner geometry and the path to placement.



PROCESS

- System uses press button remote control to trigger each liner placement task.
- Visual detection system onboard the RUSSELL MRM scans a unique QR Code on the AutoMotion-ready liner which has data about the liner's destination and efficient path telemetry.
- On-board robotic controller directs the RUSSELL MRM to engage, lift and move the liner into position, aligning liner and mill shell boltholes with millimetre accuracy.
- Liner bolts are secured from outside the mill using RME BOLTBOSS.
- On-board robotic controller directs the RUSSELL MRM to release the liner and autonomously repeat the process for the next liner.
- System can also be triggered using the person-portable radio remote control from outside the mill.



FEATURES

- RUSSELL *AutoMotion* is a Robotics software solution designed for use on the specifically equipped Model R & S+ RUSSELL 7 Mill Reline Machine.
- The RUSSELL 7 Model R & S+ are fitted, from factory, with a variety of sensors, accelerometers, encoders, visual detection system, on-board robotics controller, zero-backlash turntable and man portable radio remote control.
- The *AutoMotion* software uses collision avoidance technology to eliminate the risk and cost of unwanted damage to the MRM and mill.
- Ramp control capabilities protect the integrity of the MRM and extend service life.
- Pre-defined path planning technology eliminates the time wasted trying to achieve the correct geometry for liner placement and removal.
- Implementation of *AutoMotion* involves change to operations and processes and can be supported by RME's proven operational readiness program and OEM-certified Customer Service Technicians.



APPLICATIONS

- RME *AutoMotion* is an advanced semi-automated control system for RUSSELL 7 MRMs.
- Integrates with RME INSIDEOUT Technologies to deliver a system that enables relining to be performed at faster speeds and with no one inside the mill during liner exchange.
- Ideal for mine sites with medium to large SAG, AG and ball mills or long-life mines, and who are seeking to transform risk ratings and mill availability.
- Included as standard on RUSSELL 7 MODEL R *AutoMotion* MRMs.
- Available as an upgrade for RUSSELL 7 MODEL S and S+ MRMs manufactured from 2024 forward.



Filmed MILL RELINE DIRECTOR Studies have quantifiably demonstrated RUSSELL 7 MRMs fitted with *AutoMotion* to be the most productive and safest method of mill relining.



LEARN MORE

- product.management@rmeGlobal.com
- RME Regional Service Centre
- rmeGlobal.com

WE ARE RME



RME was born 35+ years ago with a strong resolve to address our Customers' challenges. Since then, the RME Mill Relining System has quartered our Customers' time-to-reline and eradicated a great many safety issues. This same pursuit continues to drive the development of RME INSIDEOUT Technology which aims to eliminate fatal risk by enabling relining from outside the mill.

Cherylyn Russell
Chief Customer Officer, RUSSELL MINERAL EQUIPMENT