



# **THUNDERBOLT**<sup>™</sup>

**MAGNUM 2000 Recoilless Hammers**

The **THUNDERBOLT MAGNUM 2000** is the mill relining industry's most powerful recoilless hammer, conclusively delivering the ultimate in impact energy per blow. For applications where maximum force and momentum are required, the THUNDERBOLT MAGNUM 2000 will easily expedite the toughest of knock-in phases, in the most challenging of conditions for fast, reliable, safe relines and greater mill availability.



## **BENEFITS**

- Combines sheer power and force with best-in-industry equipment reliability and longevity
- Tough, stuck and deeply-wedged liner bolt removal made faster, easier and safer
- Reduced servicing intervals and lifecycle costs
- Improved component accessibility for ease of maintenance
- Optimised asset health with intelligent on-board monitoring
- Unmatched operator safety with advanced new shock reduction and ergonomics
- Reduced knock-in duration means faster relines and opportunities for improving concentrator profitability



With up to an astounding 2000 joules per blow, the new THUNDERBOLT MAGNUM 2000 is unsurpassed when it comes to completing the toughest liner bolt removal in the shortest possible time-frame while keeping your reline crew safe from harm.

### **David Groves**

New Product Innovation Manager, RUSSELL MINERAL EQUIPMENT

### **INTEGRATION READY**

**THUNDERBOLT MAGNUM Power Pack** ▪ **THUNDERBOLT MAGNUM Mobile Jib** ▪ **THUNDERBOLT Winch** ▪ **THUNDERBOLT T-MAG Moil Axis Guides** ▪ **RUSSELL Protective THUNDERBOLT Shield** ▪ **THUNDERBOLT SKYWAY** ▪ **RUSSELL Elevating Platforms**

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



**380+**

Mine sites served by RME equipment and services



**860+**

THUNDERBOLT Recoilless Hammers sold



## FEATURES

- New operator-programmable 'MAGNUM Mode' for precision safety and more granular control
- Extreme high-energy impact at 2000 joules per blow (33%↑) in MAGNUM Mode and 1500 joules in standard mode<sup>1</sup>
- Consistent, electronically-controlled strike rate of 70 blows per minute (BPM) in MAGNUM Mode (16%↑) and 80 BPM (33%↑) in standard mode<sup>1</sup>
- Extended service intervals at 100,000 blows (150%↑)<sup>1</sup>
- Groundbreaking recoil dry fire shock reduction (90%↓) minimises machine stress and operator fatigue<sup>1</sup>
- Removable casing for easier component accessibility and superior repairability
- Electronically-managed dual-action contact trigger safety mechanism eliminates risk of accidental firing
- Redesigned hydraulic systems for improved operational safety and use
- Integrates with the new THUNDERBOLT MAGNUM Power Pack, which is also interchangeable between the THUNDERBOLT MAGNUM 1000 and 2000 models

<sup>1</sup> Compared to the THUNDERBOLT 1500 Special Performance Recoilless Hammer



## APPLICATIONS

- Ideally suited to completing the toughest liner bolt removal jobs – whether it's large mills with heavyweight liners or discharge end stuck bolts – in the shortest possible time-frame
- Combines maximum power with cutting-edge technology for consistently fast, reliable and safe relines
- Early-stage commercial trials have demonstrated worn liner knock-in with reductions in and elimination of lancing, capturing further time savings
- RME stands ready to guide Customers through the THUNDERBOLT selection process for their mill requirements

## 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 is driving our development of RME INSIDEOUT Technology which helps Customers eliminate fatal risk by enabling relining from outside the mill.

### Cherylyn Russell

Chief Customer Officer, RUSSELL MINERAL EQUIPMENT

## LEARN MORE

- [sales@rmeGlobal.com](mailto:sales@rmeGlobal.com)
- RME Regional Service Centre
- [rmeGlobal.com](http://rmeGlobal.com)







## **THUNDERBOLT** MAGNUM 1000 Recoilless Hammers

The **THUNDERBOLT MAGNUM 1000** is the industry's most productive recoilless hammer yet. Its impressive, accelerated strike rate and high velocity rapid fire is proven to shorten the critical knock-in phase during mill relines. The **THUNDERBOLT MAGNUM 1000**'s versatile productivity will excel in a wide range of environments and deliver increased mill availability through fast, reliable and safe relines.



### BENEFITS

- Precision engineered for unrivalled longevity, reliability and performance in the industry
- Reduced servicing intervals and lifecycle costs
- Improved component accessibility for ease of maintenance
- Optimised asset health with intelligent on-board monitoring
- Unsurpassed operator safety with advanced new shock reduction and ergonomics
- Hammer productivity consistently high which means reduced knock-in duration, faster relines and increased mill availability



With an unwavering rapid fire rate of up to 160 blows per minute, and up to 1000 joules per blow, the **THUNDERBOLT MAGNUM 1000** outperforms every other general-purpose liner bolt removal tool when it comes to knock-in work rate, speed and safety.

#### David Groves

New Product Innovation Manager, RUSSELL MINERAL EQUIPMENT

#### INTEGRATION READY

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## FEATURES

- New operator-programmable ‘MAGNUM Mode’ for precision safety and more granular control
- High-energy blow impact at 1000 joules per blow in *MAGNUM Mode* (33%↑) and 750 joules in standard mode<sup>1</sup>
- Consistent, electronically-controlled rapid fire rate of 140 blows per minute (BPM) in *MAGNUM Mode* (55%↑) and 160 BPM (77%↑) in standard mode<sup>1</sup>
- Extended service intervals at 100,000 blows (150%↑)<sup>1</sup>
- Groundbreaking recoil dry fire shock reduction (90%↓) minimises machine stress and operator fatigue<sup>1</sup>
- Removable casing for easier component accessibility and superior repairability
- Electronically-managed dual-action contact trigger safety mechanism eliminates risk of accidental firing
- Redesigned hydraulic systems for improved operational safety and use
- Integrates with the new THUNDERBOLT *MAGNUM* Power Pack, which is also interchangeable between the THUNDERBOLT *MAGNUM* 1000 and 2000 models

<sup>1</sup> Compared to the THUNDERBOLT 750 Special Performance Recoilless Hammer



## APPLICATIONS

- Excels in a wide range of mill applications and high wear relines of small, medium and large SAG mills by offering quantifiable time-saving gains to Customers
- Combines a powerful rapid fire rate with intelligent, cutting-edge technology for consistently fast, reliable, safe relines
- RME stands ready to guide Customers through the THUNDERBOLT selection process for their mill requirements

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### Cherylyn Russell

Chief Customer Officer, RUSSELL MINERAL EQUIPMENT

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# THUNDERBOLT<sup>™</sup>

## MAGNUM MOBILE JIB

The **THUNDERBOLT MAGNUM Mobile Jib** is tailor-made to ensure THUNDERBOLT Recoilless Hammers are suspended safely, and perform superbly, during worn liner bolt removal. Its higher reach, improved ergonomics, portable versatility, and simpler operation will improve knock-in productivity, extend asset usage, and ensure fast, reliable, safe relines.



### BENEFITS

- Improve knock-in productivity – its higher reach can access more bolts and reduce mill inching
- Precision engineered ergonomically and functionally for industry-leading operator safety
- Optimise return on asset usage – use with all hammer models and across multiple mills
- Reduce downtime via easier on-the-spot servicing with integrated maintenance mount
- Improves overall equipment effectiveness (OEE) of THUNDERBOLT Recoilless Hammers
- Creates opportunities for faster, safer relines and improved mill availability



The new generation THUNDERBOLT MAGNUM Mobile Jib not only delivers robust and reliable suspension of THUNDERBOLT Recoilless Hammers, but also significant leaps forward in ease-of-operation, versatility, reline productivity and operator safety.

### Christian Kramer

THUNDERBOLT Product Manager, RUSSELL MINERAL EQUIPMENT

### INTEGRATION READY

**THUNDERBOLT MAGNUM 1000 and 2000 Recoilless Hammers** ▪ Hydraulic THUNDERBOLT Recoilless Hammers (All previous models) ▪ THUNDERBOLT MAGNUM Power Packs ▪ THUNDERBOLT Power Packs (All previous models) ▪ RUSSELL Elevating Platforms

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## FEATURES

- Capably handles working loads up to 500kg with 360 degree slewing
- Higher-reach capability – hit bolts on the mill face within a window of up to 2340mm high (30%↑) by 8000mm wide<sup>1</sup>
- Fast and easy hydraulic power-up as-standard as well as extend, retract, raise and lower functions
- Three-legged base for improved stability, reduced trip hazards and additional safety
- Fully-integrated, well-positioned steel counterweight at the rear of the mobile jib chassis for secure load balancing, greater ground clearance and improved stability
- Superior ergonomic trigger mechanisms with simplified operator controls when used with the *MAGNUM* range
- Increased operator safety with new mechanical brake to secure jib in position and prevent unintended rotation
- Built-in *MAGNUM* Mobile Jib Maintenance Mount for efficient on-the-spot servicing and reduced downtime
- New boom sheave cover for improved component protection and equipment reliability
- Compatible across all hydraulic THUNDERBOLT Recoilless Hammers

<sup>1</sup> Compared to the THUNDERBOLT Hydraulic Powered Mobile Jib



## APPLICATIONS

- Designed for mills both large and small covering an extended range of applications
- Dual-purpose suspension for bolt knock-in and THUNDERBOLT Recoilless Hammer maintenance
- Service multiple mills with the same *MAGNUM* Mobile Jib to extend equipment use, service life and return on asset

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