



# All-Products Catalogue

Blasting | Ground Support | Shotcrete and Concrete Transport  
Ore Flow Suite | Utility Vehicles

STANDING BEHIND EVERY PRODUCT WE SELL, FOR LIFE.

CANADA | USA | MEXICO | PERU | SOUTH AFRICA | AUSTRALIA

[macleanengineering.com](http://macleanengineering.com)

 **MacLean**  
Performance. Reliability. Innovation.





MacLean specializes in mine vehicle designs that maximize safety and productivity in the underground environment while also reducing total cost of ownership. We build for life underground by understanding the mining cycle and connecting the right engineered solution and technology to the right application. This is MacLean 'Application Intelligence'.

We have built an enduring, valued brand in the mining sector by leveraging our decades of underground mining experience with our custom manufacturing expertise, supported by a five-factory footprint in North America and a global network of customer service and support.

We stand beside our mining customers by standing by our mining vehicles across their complete lifecycle. This means:

- a dedicated, global MacLean staff of field service technicians along with technical product support and 18-hour per day remote troubleshooting;
- safety and skills training delivered in-person, via e-learning, and using virtual reality technology;
- 24/7/365 online documentation, hazard notification, and parts ordering;
- real-time vehicle telemetry with cloud-based dashboarding for actionable intelligence on performance and maintenance.

We have been innovating for mining equipment safety and productivity for almost 50 years, with customers on six continents and MacLean branches across Canada as well as in the United States, Mexico, Peru, South Africa, and Australia.

Our Research & Training Facility in Greater Sudbury, Ontario, Canada, is the hub of the MacLean Advanced Vehicle Technology team that leads the company's efforts in the areas of electrification, automation, and digitalization. This MacLean investment in technology expertise and infrastructure is aligned to the company with long-term industry changes in the areas of cleaner, smarter underground mining. This means removing diesel fine particulate from the underground environment, harnessing the potential of digitalizing the underground environment, and introducing increasing levels of autonomous operations to support safer, lower cost, and more efficient operations.

The tech-enabled MacLean mining vehicle fleet is built on a foundation of parts and maintenance commonality that delivers maintenance efficiencies and reduces mobile equipment downtime and total cost of machine ownership.



This is what we mean when we say we build for life, underground. Our longstanding commitment to mining safety and productivity runs deep and guides everything we do in the day-to-day from the design, manufacturing, and support of MacLean mining vehicles around the globe.



# Technology Innovation

MacLean EV Series™: Full-Fleet Electrification | EV-proven, EV-ready



The 2016 introduction of the MacLean Battery Electric Vehicles (BEVs) was a product development milestone for the company. Since then, MacLean has built a BEV ‘network effect’ across Canada with 30+ battery electric units working underground in four provinces. The industry push for diesel-free mobile fleets continues to gain momentum, driven by mines’ need to improve the underground work environment, increase productivity, reduce maintenance costs, and meet corporate carbon reductions goals.

### EV Benefits:



Reduced Heat & Noise Generation



Elimination of Diesel Particulate Matter



Reduced Planned Maintenance Requirements



Reduced Ventilation Requirements

### 2021

- 30+ battery electric mining vehicles working underground
- 10 mine sites, 4 major mining companies, 4 Canadian provinces
- 80,000+ operating hours since EV Series launch in 2016

# Technology Innovation

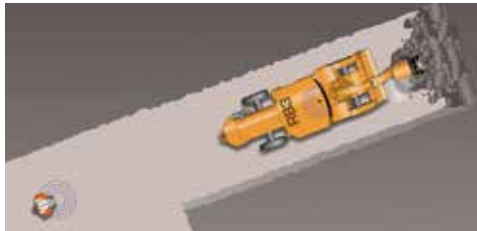
MacLean IQ Series: Remote Control Systems



The first package of commercialized products from our Advanced Vehicle Technology group, under the MacLean IQ Series product line banner, consists of three levels of remote-control technology. From basic line-of-sight to surface operation packages, MacLean can deliver and support the appropriate remote-control solution for your unique underground mining environment.

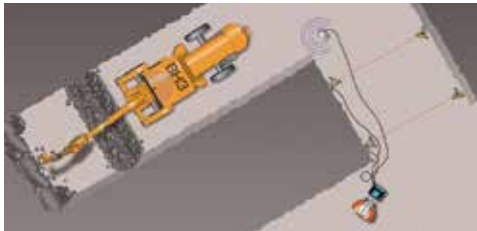
These remote-control systems are an excellent addition to the MacLean Ore Flow product line, to safely bring down draw-point hang-ups and make block caving operations, in particular, safer and more productive.

### Line of Sight Operation



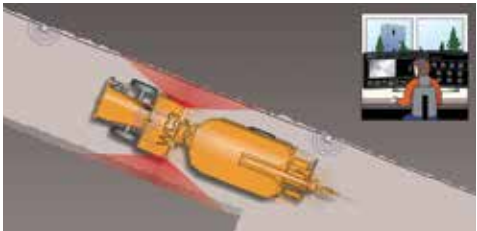
- Increased Operator Safety

### Tele-Remote Underground



- Enhanced Health and Safety
- No Boots on Ground

### Surface Tele-Operation



- Highest Safety, Utilization, Operator Comfort and Production
- Interoperability in production automation





# Blasting

Safe and effective explosive solutions for your underground mining needs.



## Product Lines

The MacLean mining vehicle product lines span a broad range of applications across the underground mining cycle, including bolting, shotcrete spraying and mobile concrete transport, explosives charging, secondary reduction, remote control operations, as well as utility vehicles, cassettes, and attachments.

### EXPLOSIVES CHARGING



#### EC3 & EC2 Emulsion Charger

A cost effective and highly productive solution for delivering high-explosive emulsion to blast holes.



#### AC3 & AC2 ANFO Charger

Safe, reliable and cost-effective solutions for quality explosives charging of bulk ANFO in underground mining.



# Ground Support

We’ve got your back when it comes to ground support installation quality, productivity, and versatility.

## BOLTING



### 975 Omnia Bolter

The paradigm-changer in ground support installation – safety, versatility, productivity, and quality, equipped with the face bolting option.



### SSB Small Section Bolter

The MacLean bolting solution for mines with smaller openings, equipped with the face bolting option.



### CB3 Cable Bolter

One-stop solution for mechanized cable bolt insertion and grouting.

## SCALING



### RS3 Scaler

Ruggedness and performance combined with industry leading ergonomics and all-round operator visibility.

# Shotcrete and Concrete Transport

## SHOTCRETE SPRAYING AND CONCRETE MIXERS



ALL NEW

### SS5 Shotcrete Sprayer

Re-designed from the wheels up: This includes a new carrier and an ergonomically designed operator’s cab with enhanced visibility and noise attenuation to support in-cab spraying. In addition, new dosing control and near-instant thickness measurement technologies have been integrated into the design to reduce the amount of process chemicals used and to improve the quality and reduce the quantity of the shotcrete applied.



### SS2 Shotcrete Sprayer

Ruggedized, mechanized shotcrete spraying system developed specifically for underground ground support applications in smaller-opening mines.



### TM3 & TM2 Transmixer

High capacity, high speed transport of wet shotcrete/concrete in a fit-for-purpose package.



### AG3 Agitator

Purpose-designed for underground mining applications where turning dry-mix into wet or adding additional mix components, such as fibers, is required in the mining cycle.





# Ore Flow Suite

For trapped reserves... let the ore flow! Secondary reduction drilling, drawpoint hangup removal, oversize breaking, all supported by remote control technology.

## SECONDARY REDUCTION



### BH3 & BH2 Blockholer

Designed to eliminate ore flow blockages and release trapped reserves in draw-points and beyond draw point brows, without endangering mine workers. MacLean remote control technology allows tramming, drilling, and blasting operations to be conducted from safe distances.



### SB9 & SB12 Secondary Breaker

The solution for attacking high boulder hang-ups without endangering mine workers. Built for the tough underground environment, equipped with radio and video systems.



### Remote Control

From basic line-of-sight to surface operation packages, MacLean can deliver and support the appropriate remote-control solution for your unique underground mining environment. These remote-control systems are an excellent addition to the MacLean Ore Flow product line, to safely bring down draw point hang-ups and make block caving operations, in particular, safer and more productive.

- Line of sight operation
- Tele-remote underground operation
- Surface tele-operation



### RB3 Rockbreaker

Combining MacLean-quality ruggedness and performance with industry-leading ergonomics and all-round operator visibility, the RB3 is truly a groundbreaker.



### Auto Explosives Charger

Engineered design for the 'No boots on the ground' mining philosophy. An innovative combination of loading carousel, control package, and Human-Machine Interface (HMI) for the loading of multiple wireless explosive charges.



### WC3 & WC2 Water Cannon

Harnessing water power to increase ore recovery. Washing out loose fines between oversize blocks by pumping 10 to 12,000 liters at high pressure to bring down hang-ups.





# Utility Vehicles

MINE-MATE™ Utility Vehicles for tough underground environments – ruggedized design, parts commonality, and maintenance efficiencies.



## MINE-MATE™ UTILITY VEHICLES



### SL3 & SL2 Scissor Lift

Underground multi-tasker for mine services installation and rehab.



### LR3 Boom Lift

Designed to provide a safe work platform for installation of services in tunnel headings. Certified elevated work platform with Remote Drive System (RDS), high reach and payload capacity; quick attach system with a versatile range of work baskets and attachments for mine service installation, construction, and maintenance.



### BT3 & BT2 Boom Truck

The MacLean-engineered solution for high-capacity transportation of materials and equipment in underground mines.



### FL3 & FL2 Fuel/Lube Truck

For timely supply of diesel fuel, oils and lubricants in underground mining – an integral member of the MacLean bulk materials transfer system. A fuel lube can also be configured to haul as a fuel tanker.



### DT3 & DT2 Deck Truck

Highly customizable to your material handling needs, with a range of deck sizes and a power train that can be matched to meet load requirements.



### WS3 & WS2 Water Sprayer

Ruggedized design for dust control in the underground work environment.



### PC3 & PC2 Personnel Carrier

Where time is at a premium and travel distances long – a comfortable, rapid transportation system for workers and materials in underground mines.



### GR5 Underground Grader

Purpose-designed underground grader for haulage ramp maintenance, supporting maximal down-ramp energy regeneration on BEV fleets.



### CS3 Cassette System

Designed for full utilization of the MacLean carrier through quick adjustments from one configuration to another. This versatility provides for reduced fleet size and lower capital equipment investments.

- Crane truck
- Deck truck
- Emulsion/ANFO charger
- Fuel/Lube truck
- Fuel tanker
- Personnel carrier
- Mechanics truck
- Scissor lift
- Water sprayers





# Attachments

Purpose built, interchangeable attachments that effectively perform installations of ventilation fans & ducting, air & water pipes, mine services, and cable bolts for ground support.



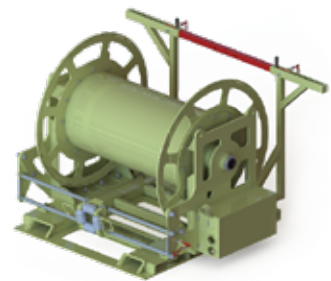
PHA Pipe Handler



FHA Fan Handler



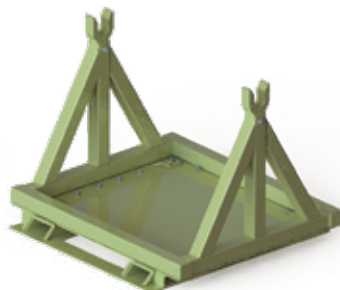
FCA Fan Cradle



CRA Cable Reeler



CPA Cable Pusher



CSA Cable Spool



RDA Raised Deck







# TOTAL CARE. SERVICE & SUPPORT THE MACLEAN WAY.

## WHEN YOU BUY A MACLEAN MINING VEHICLE, YOU ARE FAMILY.

MacLean invests heavily in a global infrastructure of customer and technical support, field mechanics, operator and maintenance trainers, virtual reality training technology and an e-Learning platform, product managers, and engineering staff. The result: increased machine productivity and operator safety and a lower Total Cost of Ownership (TCO) for you.

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