



## Drilling and bolting retrofit solutions



Retrofits for components compatible with every major brand of bolter and jumbo.





**Harnessing the power** of industrial technology to support a sustainable, prosperous future for all.

You move the minerals.

**We make the machines.**

The essential minerals you produce power modern technology, facilitate community growth and move society forward. But these minerals are hard to find and tougher to mine. Your customers trust you to deliver these resources, so you need an equipment, service and technology provider you can rely on to help keep your operation productive and efficient. Together we can focus on operating safely, productively and responsibly.





# Compatible with every major bolter and jumbo

Our customers have told us they want a way to revitalize existing machines with new and performance proven components. Yet, there are always concerns about compatibility.

That's why we've created a retrofit program with key components that are compatible with every major manufacturer of bolter and jumbos. Since our retrofits are brand-agnostic, you have the peace of mind in knowing you'll get an excellent fit. It's what mining operations need to help reinvigorate aging or underperforming underground hard rock machines.

## Why retrofit?

Your fleet investments in bolters and jumbos have been significant. But, if your machines are aging rapidly or not performing as expected, replacing them is an expensive option. Vital and critical components, such as feeds, drifters, bolting heads and bolter anchorage systems may just need to be replaced. It's a cost-efficient way to refresh your underground mining fleet, boost performance and prolong the life of your machines.

Retrofits can enable underground hard rock mining operations to:

- Extend the longevity and usefulness of an existing drilling fleet overall
- Help reduce maintenance and repair costs
- Help mines improve productivity

## Standardize your fleet

- Operators and mechanics train one system versus multiple components
- Rebuilds and maintenance require only one service provider
- Reduce the need for excess inventory



**Streamline your operations** by upgrading your fleet to a Komatsu drilling solution.

**Reimagine what your fleet can do with four offerings that add exceptional performance to your existing bolters and jumbos. Choose any or all based on application and need.**

### Drifters

**Help maximize your hard rock drilling productivity with Komatsu drifters, built by Montabert. These quality-built components feature patented and proven energy recuperating, hydraulic dampening and progressive blow energy technologies.**

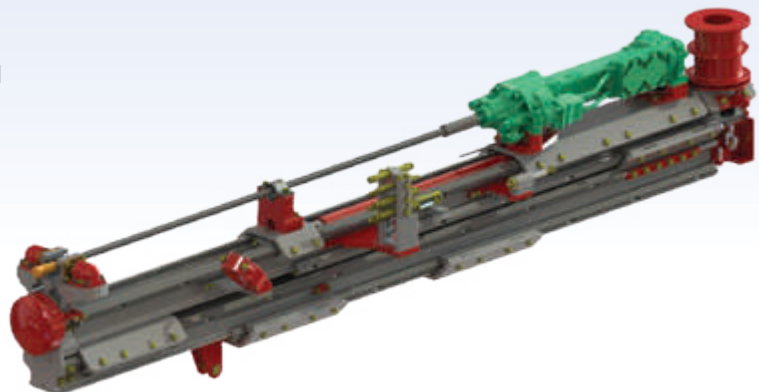
- Available in multiple sizes for various applications
- Lower noise and less vibration for enhanced operation
- Excellent drill life span with long-lasting components



### Feeds

**Komatsu fixed and telescopic feeds, built by Timberock, are designed to maximize drilling performance, helping to increase your uptime. The feeds are engineered for seamless drifter integration with lightweight, durable components.**

- Lightweight, durable, and cost-effective
- Aluminum and urethane components and drill-specific steel drill mounts
- Lighter weight helps reduce overall wear and tear on boom components



## Bolting heads

**Designed to enhance your hard rock drilling operation with flexible and durable materials. Multicarrier function promotes increased productivity as the bolter heads are set up for a variety of bolts.**

- Seamless retrofit on most drill manufacturers
- Bolter systems incorporate two independent feed systems
- Load up to nine bolts from a carousel — all four major bolt types



## J-LOK P pumpable resin injection system

**Enhance your bolting with the J-LOK P system by JENNMAR, available as a retrofit solution on existing bolters. According to JENNMAR, J-LOK offers substantial advantages over traditional urea silicate-based resins.**

- Better bolt encapsulation than resin cartridges
- Variable set time starting as fast as ten seconds
- Increased longevity





**Montabert drifters** are proven in the field to increase productivity while promoting a zero harm environment for operators.



## Montabert drifters

### Cost-effective performance

Legendary Montabert drifters are engineered to deliver better energy transmission to the bit, enhancing your drilling while providing cost-efficiencies for your mining operation.

- Designed for low maintenance and reduced production and consumables costs
- Designed for increased tool life (striking bar, bits, and coupler)
- Designed for less wear on drifter body
- Long-lasting components help promote optimal drill life span

### Promotes zero harm








Montabert drifters enhance the operator's environment compared to other rock drills in the same class.

- Lower noise level
- Less vibration
- Longer rebuild intervals mean less time at the face for operators

## Ready for a retrofit?

Contact your Komatsu Mining service rep or visit <https://www.komatsu.com/en/services-and-support/drilling-bolting-retrofits/> for more information on converting to a Komatsu drilling solution.

## Drifter models

Model		Weight	Percussion power	Impact rate	Percussion flow pressure	Rotation flow pressure	Application	Hole range
HC25		72 kg 158 lbs.	8 kW 11 HP	3 900 BPM	65 L/min 17 gpm 150 bar	30-48 L/min 8-13 gpm 175 bar	Light face drilling, bolting	38-64 mm 1-2 in
HC28		103 kg 227 lbs.	6-9.8 kW 8-13.3 HP	3 200 BPM	68 L/min 18 gpm 160 bar	48 L/min 13 gpm 210 bar	Light face drilling, bolting	32-64 mm 1.25-2.5 in
HC50		103 kg 227 lbs.	14 kW 19 HP	Up to 4 400 BPM	80-105 L/min 21-28 gpm 150 bar	25-52 L/min 7-14 gpm 150 bar	Face drilling, bolting	45-76 mm 1.75-3 in
HC95		170 kg 375 lbs.	Up to 24 kW Up to 32 HP	Up to 3 800 BPM	90-120 L/min 24-32 gpm 160-200 bar	48-75 L/min 13-20 gpm 210 bar	Face drilling, long hole, bolting, scale	45-102 mm 1.75-4 in
HC109		142 kg 313 lbs.	Up to 27 kW Up to 36 HP	2 900-3 500 BPM	100-135 L/min 26-36 gpm 135 bar	30-60 L/min 8-16 gpm 150 bar	Face drilling, long hole, bolting, scale	45-102 mm 1.75-4 in
HC110		200 kg 441 lbs.	Up to 27 kW Up to 36 HP	4 620 BPM	90-170 L/min 24-45 gpm 165-225 bar	65-75 L/min 17-20 gpm 175 bar	Face drilling, long hole, tunneling, shaft drilling	51-89 mm 2-3.5 in
HC112		248 kg 547 lbs.	26 kW 35 HP	2 740 BPM	170 L/min 45 gpm 180 bar	70-80 L/min 18-21 gpm 175 bar	Long hole	76-127 mm 3-5 in

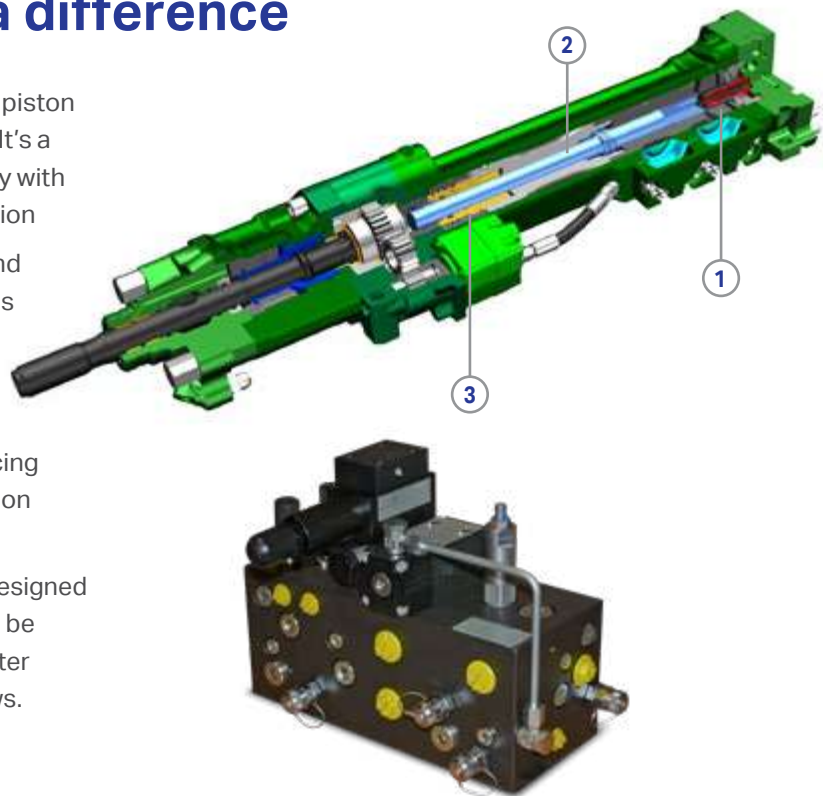
## Features that make a difference

**Energy recovery valve:** This feature enables piston rebound energy to be used for the next blow. It's a patented design that helps promote efficiency with no internal peak of pressure source of cavitation

**Unique piston design:** Engineered for high and constant impact energy, this design generates long, trapezoidal-shaped shock waves for better energy transmission to the bits.

**Hydraulic dampening system:** This feature helps protect the drifter and tools while reducing vibration. Optional hydraulic reverse percussion system supports real back hammering.

**Available Montabert Intelsense Controls:** Designed for use with Montabert drifters, Intelsense can be added to older machines to help maximize drifter performance by optimizing pressures and flows.



# Enhance your chemical bolting system

Upgrade your chemical bolting system operations or retrofit your bolters with the JENNMAR J-LOK P pumpable resin injection system. This chemical injection bolting system uses a polyester-based resin for strong bolt anchorage, variable set time starting as fast as 10 seconds, and increased longevity versus traditional urea silicate-based resin injection systems.



The J-LOK P information and claims detailed here have been provided courtesy of JENNMAR and are based on their internal product evaluations and documented performance outcomes. Unless otherwise specified, J-LOK P product claims listed here are comparisons to traditional urea silicate-based resin injection systems.

### Strong, reliable and cost-efficient

Compared to standard, more traditional urea silicate-based resins that most other OEMs offer, the J-LOK P polyester based resin:

- Is designed to deliver stronger and more reliable bolt anchorage
- Is more economical
- Can result in lower installation costs

### Long storage life

An extended shelf life has several benefits.

- J-LOK P is capable of over a year of shelf life under proper storage conditions
- Long stability and storage life can simplify inventory
- Allows greater capability to keep what you need in stock for the long haul
- Composition is free of isocyanates, the harsh carcinogenic chemicals found in urea silicates





**J-LOK P pumpable resin injection** system promotes a zero harm mentality with exceptional bolting performance.

**Less sensitive to environmental factors**

J-LOK P environmental benefits include:

- Reduced concern for product deterioration or chemical change of materials, compared to urea-silicate resins
- Ideal composition for the changing and harsh temperature conditions of underground hard rock environments
- Less susceptible to corrosion than urea silicate-based resin

**Quick specs**

- **Composed of 80% inert limestone filler particles**
- **J-LOK P composite has a UCS of 6,500 psi**
- **Polyester resin used to manufacture J-LOK P has a flexural strength of 16,500 psi/113 MPa (ASTM D790)**

The J-LOK P delivers better bolt anchorage than urea silicate-based resin systems, especially in loose ground. Plus, it offers consistent bolting installs and is less prone to imperfection than urea silicate-based resin systems.



**Coming soon as an option for Komatsu machines**

Currently, the JENNMAR J-LOK P system is only available as a retrofit on your existing bolter. Our product experts are working hard to make this advanced system available on new Komatsu bolter models in 2022.

# Working together, we can help revitalize your bolter and jumbo fleet with turnkey and customized retrofits

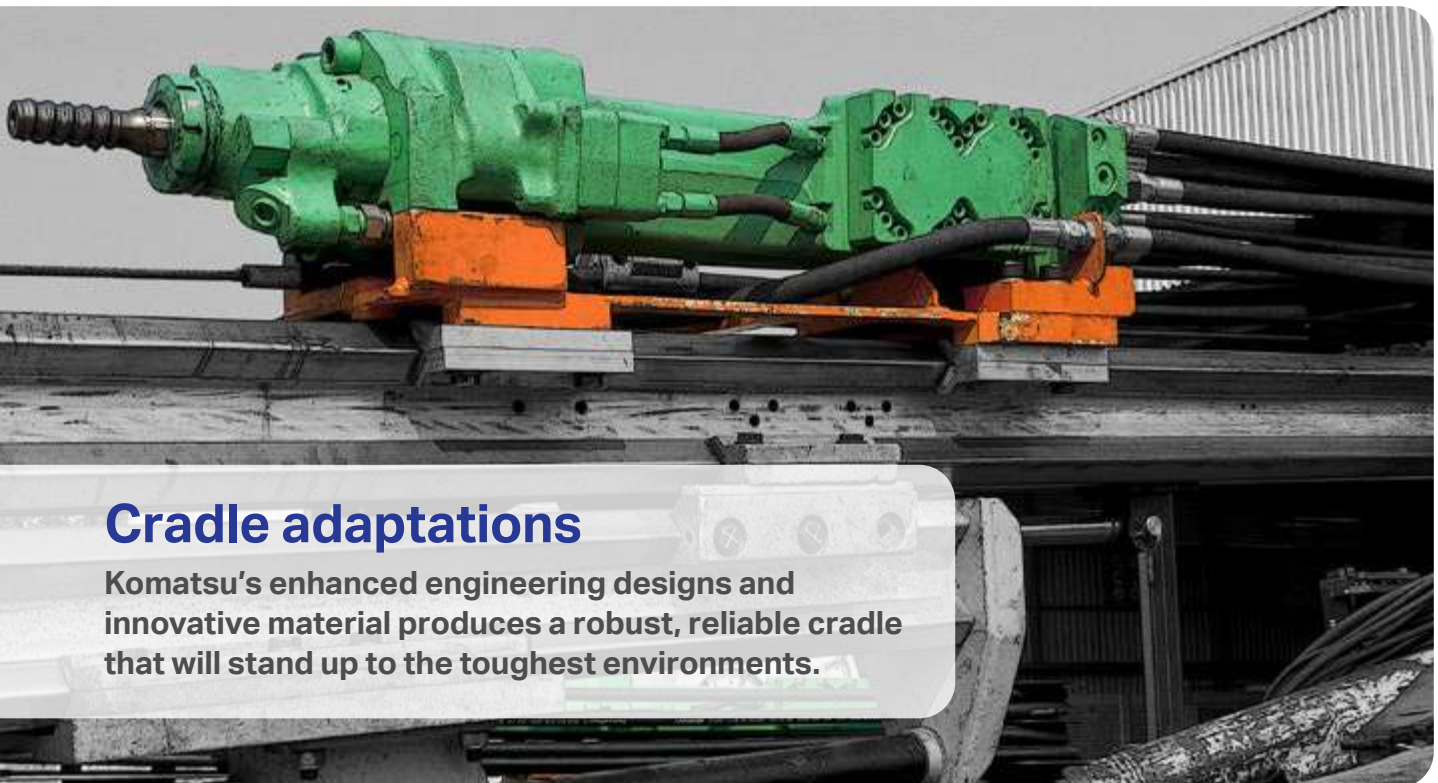
### A turnkey solution

Drilling and Bolting Retrofit Solutions help standardize fleets, which means a reduced need for excess inventory, operator and mechanic training on one system, and one global service and product support provider for you. We offer conversions of drifters, controls, feeds and bolter heads. Plus, our extensive experience performing retrofits means a seamless transition, regardless of drill manufacturer.

Best of all, with our service network, you have support on a global scale to ensure you maintain the level of quality and reliability you need.

### Your retrofit partner

Our drilling experts will work with you to identify and solve your unique challenges with a focused application and solution optimization approach.



### Cradle adaptations

Komatsu's enhanced engineering designs and innovative material produces a robust, reliable cradle that will stand up to the toughest environments.



### Did you know?

Retrofitting your fleet can help reduce downtime by improving your drilling and bolting maintainability with common parts and components to minimize any unplanned stoppage.

### Ready to retrofit?

Contact your Komatsu Mining service rep at for questions or arrange for a retrofit solution consultation. For more information, visit [Komatsu retrofit solutions](#).

## Equipping the world to empower a sustainable future together

For the last century, the companies that power society and develop the world's infrastructure have relied on Komatsu to empower them. Through manufacturing, technology and service innovation with unmatched quality, reliability, insights and support, we work as your partner to create lasting value for your business.

Committed to enhancing your entire ownership experience, we leverage the intelligence of big data to deliver actionable insights and provide the technology needed to make sure you have the service, tech tools and parts you need to reduce downtime.

### Your global partner

Tomorrow's mining demands ever-evolving technology to lower costs, raise productivity and drive zero harm. With virtual work sites throughout the world, we're able to develop and deploy the right technology at the right time.





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