

# KOMATSU

## Blasthole drills





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

### **You move the minerals, we make the machines**

The mineral resources you mine are essential to drive modern technology, facilitate community growth and move society forward. But these minerals are hard to find and difficult to extract. 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.

### **Comprehensive solutions**

At Komatsu, we believe that safety, reliability and productivity are the cornerstones upon which you build your business. As your trusted partner, we're committed to helping you achieve these results.

### Our values are built upon your most important goals

#### Safety

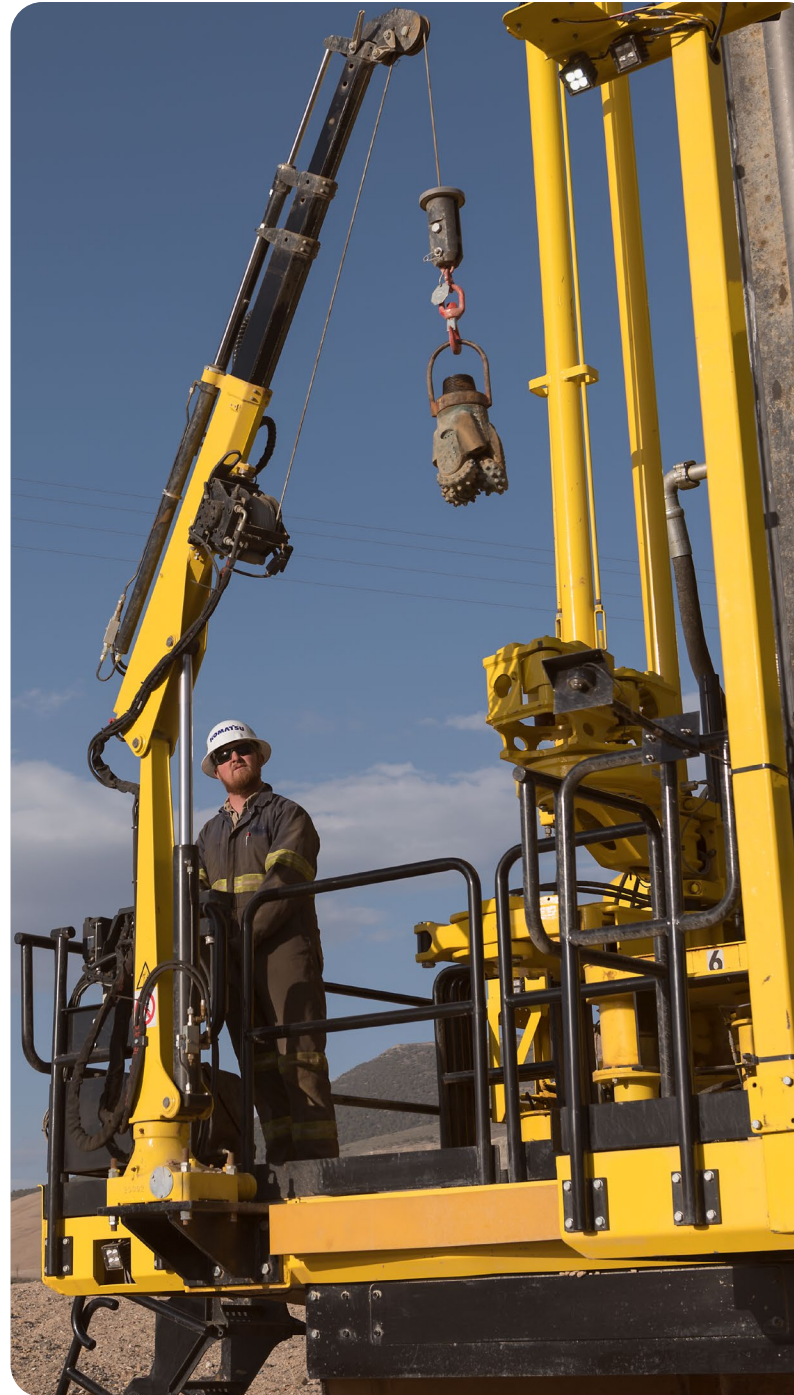
- Engineered solutions to reduce exposure to live work tasks
- Low dB(A) audible noise footprint reduces occupational exposure
- Full windows, bright night-time illumination and multiple video cameras provide maximum visibility in any condition
- Drills feature protective guarding and components that are easily accessible, enhancing safety for operators and maintenance personnel

#### Reliability

- 100-year history of producing durable equipment
- With one of the largest service footprints in the industry, we're there when you need us
- Effective in all extreme conditions including heat, cold, arctic, heavy dust, high elevation, poor visibility and weak power grids
- Robust chassis and structures enable reduced component wear, providing more uptime

#### Productivity

- Auto-bit carousel provides the ability to flex hole diameter quickly so operators can adapt the mine plan in less time
- Drill mast designed for high-cycle fatigue resistance, reducing downtime
- Fewer components exposed to wear, reducing maintenance and increasing uptime
- Our engine/compressor technology provides high penetration rates while optimizing fuel burn



**Delivering customer-driven mining solutions to our partners throughout the world.**

### The reliability you need for the productivity you demand



### Ready for the toughest conditions

It's easy to find machinery that will function well in ideal environments.

But you can count on Komatsu drills to deliver consistent performance when working in the toughest rock conditions — wherever the mine is located.

#### Weak power grids

The electric 320XPC has a soft-start transformer option that limits the impact of starting the drill on weak power grids by reducing the initial inrush current. This can reduce overall power infrastructure cost and increase the life of the main motor and compressor.

#### Extreme temperatures

Performing reliably throughout the globe, our drills protect the operator and equipment in temperatures as cold as -40°F (-40°C). Both the ZR and ZT drills feature a best-in-class heat exchange unit to mitigate high thermal loads generated during operation, with the ZT44 able to handle temperatures up to 131°F (55°C).

#### High altitude

Committed to providing reliable drilling equipment for all your needs, we offer machines that have the power and air capacity to maximize productivity at altitudes as high as 15,000 ft. (4,572 m).

## On the job with rotary and track drills

### Rotary drills deliver results

With a long history in platform-type drills, we continue to improve our drills to enhance your capabilities.

- Powerful rack and pinion pulldown
- Rugged structures
- Optimized air
- Superior propel
- High-pressure hammer drilling option

### Track drills get the job done

Expanding our blasthole drills product line, these purpose-built contour drilling machines complement our rotary equipment so you're equipped for any surface drilling need.





- Increased horsepower
- High air capacity
- Higher torque
- Faster penetration rates



**Ready, set, go**

**With a reliable, adaptable and powerful drill, your mining operations can move forward. Count on our blasthole drills to get the job done!**

## Versatile, robust solutions for all your mining applications

Model		Hole diameter	Single pass	Multi pass
ZT44		140 mm – 216 mm 5 1/2 in – 8 1/2 in	6.1 m plus drill string 20 ft	42.7 m/140 ft (Up to 4.5" pipe) 30.5 m /100 ft (Up to 5.5" pipe)
ZR77		200 mm – 270 mm 7 7/8 in – 10 5/8 in	16.8 m 55 ft	85 m 280 ft
ZR122		270 mm – 349 mm 10 5/8 in – 13 3/4 in	19.8 m 65 ft	85 m 280 ft
320XPC		270 mm – 444 mm 10 5/8 in – 17 1/2 in	19.8 m (standard) 65 ft 21.3 m (optional) 70 ft	39.6 m (single pipe rack) 130 ft 59.4 m (dual pipe rack) 195 ft



**ZT44**

Designed for mining applications and featuring dual-engine and compressor control settings, this highly productive and reliable machine delivers versatility for production, pre-split and auxiliary uses.



**ZR77**

Featuring an innovative boxer-style mast paired with a single rack and pinion pulldown system, this machine can be configured for rotary or DTH drilling, diesel or electric power, and single- or multi-pass drilling.

## Model

### Drilling method

### Power train

### Technology

**ZT44**

DTH

Diesel

Semi-autonomous  
Digital surround camera system

**ZR77**

DTH  
Rotary

Diesel  
Electric

Fully autonomous  
HPGPS with geofencing  
Digital surround camera system  
Proximity detection

**ZR122**

DTH  
Rotary

Diesel  
Electric

Fully autonomous  
HPGPS with geofencing  
Digital surround camera system  
Proximity detection

**320XPC**

Rotary

Electric

Fully autonomous  
HPGPS with geofencing  
Digital surround camera system  
Proximity detection



### ZR122

With up to 122,000 lbs. (55,338 kg) of bit loading, this machine can be configured for rotary or DTH drilling, diesel or electric power, and single- or multi-pass drilling. This drill is the workhorse for 12 1/4" (311 mm) hard rock drilling in the toughest mining applications.



### 320XPC

Perfectly matched with P&H 4100XPC shovels, the 320XPC has been designed to handle the most complicated strata variability, delivering up to 150,000 lbs. (68,039 kg) of bit loading and has operational longevity. It's the preferred choice for large diameter blasthole drilling in extremely difficult rock conditions.



## Advanced technology that enhances safety and performance

### The features you need

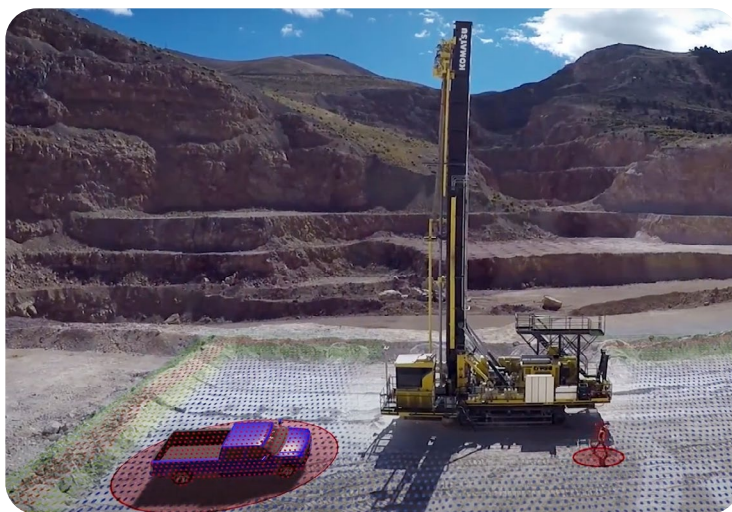
- High-precision GPS with geofencing
- Pattern management
- Autopilot
- Proximity detection and collision mitigation
- Hole positioning
- Advanced auto drill

### Stratification modeling

- With Komatsu stratification modeling, you can map out the material conditions using the energy effort index, creating geological data information that can supplement decisions around blast planning
- With the Komatsu ProVision Machine Guidance stratification module, you can refine drill and blast processes to reduce explosives costs by more than 20%

# Digging deep with drilling tech





### PreVail remote health management system (RHM)

The PreVail remote health management system (RHM) provides timely and efficient knowledge on your machine's health and performance data.

Tapping into the powerful communication, command and control capabilities of the electrical control system, PreVail RHM transforms data and information into more refined and actionable knowledge that becomes valuable to your maintenance team management and overall operations.

#### Powerful data with PreVail RHM

With this health management system installed on your Komatsu drills, you can quickly see:

- Benchmarking of key performance indicators to make performance gaps more visible and set in motion corrective measures to maximize productivity
- Increased asset performance visibility to help you determine when to intervene — and position you to minimize corrective action cost
- Valuable risk management tools to help reduce troubleshooting time and mean time to recovery
- Operating practices analysis to allow for review and correction of operators not following best practices for optimal productivity

#### Smart tech and teleremote capabilities

**ZR Series onboard smart technologies**, like autobit changing and auto-pipe handling, to help lower operational costs, eliminate live work and optimize machine performance.

**The portable drill command console** allows you to operate the drill remotely using a teleremote system, even in areas where direct line of sight is not possible, up to 1,641 ft. (500 m). All drill control functions are available through the console and can be controlled over a network with low bandwidth requirements.

**The ZR Series intelligent compressor control** regulates airflow to manage chip settling velocity, reduce fuel consumption and extend drill string life, while delivering a constant, predictable penetration rate.

# Blasthole drills

## Consumables for your Komatsu drill

In addition to our line of durable drills, we also have blasthole drill tools to support your demanding drilling needs. All of these blasthole tools are designed to provide top performance and superior overall value.

These tools contribute to reduced rig maintenance, lower operating costs and increased productivity.

## Committed to your goals

You, our customers, are always top of mind in everything we do. Whether we're designing equipment, manufacturing machines or producing top-quality consumables, our goal is to make your job safer, easier and more productive.

## Blasthole drill steel



- Tool joints fabricated from alloy steel
- Wrench slots are milled to suit customer preference
- Integral drill steel is forged from premium alloy

## Topsup and bitsub



- Topsup serves as adapter between drill pipes and shocksub; protects threads against wear and damage
- Bitsub is integral, providing a crossover connection to provide superior wear protection and long life

## Stabilizers



- Better penetration rates
- Increased life
- Lower overall operating costs

### Equipping the world to empower a sustainable future together

Although we've been historically known for our superior equipment, we also provide comprehensive service solutions and fleet management technology.

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.



### Komatsu: Leading the way forward with technology for the mining of tomorrow

Tomorrow's mining will demand ever-evolving technology in order to lower costs, raise productivity and increase utilization. With virtual work sites worldwide, we're able to develop and deploy the right technology at the right time. The key to a sustainable future starts by moving forward together.



### Ready to convert?

Contact your Komatsu Mining service rep or visit [komatsu.com](https://www.komatsu.com) for more information on converting to a Komatsu drilling solution.

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