



How to operate a computer-controlled rock drill

How does a rock drill work?

A rotating horizontal laser plane is generated by a laser transmitter. A receiver is mounted to the rock drill. The theoretical depth (see illustration below) is entered into the system, and the drilling is automatically stopped when the vertical plane has been reached. This means that every hole has its own depth, depending on the topography.

What was the first hydraulic rock drill built by Atlas Copco?

The first hydraulic rock drill built by Atlas Copco was the 818H, built in 1976 which was driven by the most common control system used by surface crawlers today. There were no automation features available, and all operator controls were manual. One example of an Atlas Copco PLC-equipped drill rig is the ROC F9, which was introduced in 1998.

What GPS system does a drill rig use?

To achieve high accuracy, the system uses the RTK GPS system (Real Time Kinematic GPS) with which it is possible to limit error in X-Y coordinates on the drill bit to less than 10 cm. The rig itself communicates with the satellites via two separate GPS systems.

Why does a drill rig make noise?

When using a drill rig, noise is generated from several different parts of the rig such as the rock drill, the drill string, the drill bit hitting the rock, the engine, the cooler fans, and the hydraulic and pneumatic system. Since the noise is generated from various sources, it also has to be silenced in several ways.

How does a drill plan work?

The drill plan is transferred to the rig via a PC card and the drill plan is read into the system "the normal way." The operator selects a hole to drill in the drill plan. Depending on the distance to the hole, different guiding displays appear on the display, helping the operator to tram and find the correct place to start drilling.

How a drill bit is recalculated?

Depending on the Z-coordinate of the drill bit, the projection of the hole is recalculated several times per second. The calculated hole start is calculated from the predefined bottom level, up to current position of the drill bit.

Discover the perks of remote-controlled cordless drills, from precision to safety, with details on wireless systems, app integration, voice and gesture controls, and key fobs. Find ...

More complex rigs that are computer-controlled can be easier to operate with their auto feature, but the drilling may be slower than an experienced manual operator who can do more tons or ...



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What is a Military Rock Drill? A military rock drill is a meticulously planned and executed simulation exercise designed to rehearse specific military operations or contingency ...

By following these guidelines, you can ensure the safe and efficient operation of a rock drill. Remember to prioritize safety at all times and consult professional assistance if needed.

Drilling a hole into rock requires careful planning and the right tools. Learn about selecting equipment like impact drivers and hammer drills, preparing the surface, creating pilot ...

To operate the jumbo drill, the operator must first position the boom and feed in the desired location. Once the drill is properly positioned, the rock drill is activated, and the feed is ...

It's softer than granite but can still present drilling challenges. To drill limestone effectively, consider using carbide-tipped drill bits. These bits are suitable for softer rocks and ...

Learn how to conquer rocky terrains with the ultimate guide on drilling through rock formations. Discover the secrets to selecting the perfect equipment, mastering drill bit ...

If you're in the business of installing underground utilities, chances are you've considered using a Vermeer directional drill. Also called a horizontal directional drill (HDD), ...

A rotating drill bit with cutting elements shears or crushes the rock. This method is well-suited for softer to medium-hard rock, as seen in oil and gas drilling. Rotary-Percussive ...

A typical use of an input/output module is in controlling the valves on the feeder for maneuvering the rock drill. There are a maximum of five input/ output modules on a SmartRig.

Air leg rock drill is a tool work in quarrying, construction and mining, which uses compressed air to drive rock drilling tools for rock drilling operations.

Understanding the Basics of Top Hammer Rock Drill Rigs First off, let's talk a bit about what a Top Hammer Rock Drill Rig is. It's a specialized piece of equipment used in ...

Discover how to choose the right drill for rock with our in-depth guide! ? Learn about various rock types, tool specs, and performance features to enhance your project.

This is everything you need to know for drilling holes in rocks, big or small. Including tips for drilling holes with rotary tools as well as with a drill press.



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Learn how to operate a drilling machine safely with our step-by-step guide. Follow essential safety tips, from wearing protective gear to maintaining your drill for ...

The potentiometer is on the left-hand side of the control box. Use a screwdriver to set the desired time. Page 201: Use Of Consumables Function SmartROC D65 T4F 10 Options 10.13.2 Use of ...

Learn the best practices for operating a rock drill safely and effectively. We're here to share tips that enhance performance and help you tackle tough jobs confidently.

Intelligent rock drilling and blasting represent the current direction of advancement in underground mine excavation in China. With the adoption of computer-controlled drill ...

This comprehensive guide will explore the various types of rock drills, the procedures for their safe operation, and the critical factors for optimal performance, from ...

This comprehensive guide will teach you everything you need to know about using a rock drill, from tips and techniques to safety precautions. Whether you're a beginner or an ...

The wind drill, or wind-driven rock drill, is a drilling tool that obtains its power through compressed air and is mostly found in mines, concrete, ...

Gasoline rock drills use the explosive force of gasoline to drive the piston to impact the steel drill bit, mainly used in construction sites without power or gas ...

The aim of the instructions is to provide you with knowledge of how to use the rock drill in an efficient, safe way. The instructions also give you advice and tell you how to perform regular ...

In this video, we showcase the Power Rock Drill, a high-performance tool designed for tough rock drilling tasks. Whether you're working on construction, mining, or ...

Key Takeaways -- Safe and Efficient Guide How to Drill a Hole in a Rock Selecting the right drill bit is crucial when drilling a hole in a rock. Opt ...

A CNC (Computer Numerical Control) drill press is a machine tool meant to make the drilling part of the machining process automated and highly ...

Can I use a regular drill for rock? While possible for very soft stones, a hammer drill or rotary hammer is



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strongly recommended for most rock drilling. Regular drills lack the hammering ...

Learn the art of drilling through rocks successfully with our guide! Discover how to select the right tools, understand rock properties, drill safely, and clean up post-drilling. From ...

Learn how to effectively use a jackleg drill with this comprehensive guide. From understanding the components of a jackleg drill to mastering ...

Always position the drill bit carefully on the rock face and collar the hole at partial throttle to keep control of the drill. Start holes with the bit face flat to the rock surface and adjust the position of ...

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