

# Protected by diamonds

Discover the benefits of using Epiroc Powerbit X



# Diamonds solve surprisingly many problems

Drill bits where the buttons are engineered with diamonds, protect your people, your productivity and the environment. The technology is called PCD (polycrystalline diamond) and is used in our Epiroc Powerbit X range. Read on to explore how Epiroc diamond technology can help you improve workplace safety, reduce downtime and minimize CO<sub>2</sub> emissions.

## Safety | Eliminate live work

Improve safety with fewer drill bit changes

## Productivity | Expand the potential of automation

Boost productivity by drilling without interruption

## Environment | Cut down CO<sub>2</sub> emissions

Reduce the amount of CO<sub>2</sub> emissions per drilled meter – by up to 90%





**Protected by diamonds  
with the new Powerbit X  
technology**

### **The Powerbit X range of drill bits**

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<b>Diameter</b>	<b>Product family</b>	<b>Product number</b>
Ø45 mm	SR35	5697002643
Ø48 mm	SR35	5697001694
Ø51 mm	SR35	5697002448
Ø76 mm	T45	5697001907
Ø89 mm	ST58	5697002447
Ø102 mm	ST68	5697001901

### **How the diamonds are applied to the drill bit**

Polycrystalline diamond (PCD) means sintered together a mass of randomly oriented diamonds. A durable structure is created by applying a diamond powder mixture on top of each button and subject it to high pressure and temperature.

# Improve safety with fewer drill bit changes

Changing drill bits is a safety risk. The diamond protective layer of the Epiroc Powerbit X gives the drill bits substantially longer service life than those with standard buttons, which means fewer changes and less exposure to danger for operators.



## **Keep your staff safe**

Slipping and falling can lead to injured backs, hands and fingers. The less time your operators spend on changing drill bits, the better. Switching to Epiroc Powerbit X improves work safety, as the drill bits last very long. You eliminate drill bit changes before end of life.



## **Reduce traffic in the mine**

Drill bits require logistics: Inbound deliveries, main warehouse, underground stock, discard and disposal, and grinding workshop. Fewer drill bit changes mean less need for transportation and additional handling – good for your staff and for the environment.



## **Remove the need for regrinding**

Regrinding involves a lot of logistics, and operating a grinding machine is tough work. It also creates waste that needs to be taken care of. Using Epiroc Powerbit X means your drill bits will last significantly longer and need no regrinding. When a Epiroc Powerbit X drill bit is finally worn out it is time for recycling, not regrinding.







# Boost productivity by drilling without interruption

Epiroc Powerbit X lets you realize the full potential of remotely and automatically controlled production. The extremely long drill bit life means that you can drill in auto mode over lunch breaks, shift changes and blast ventilation cycles.

### **Realize the full potential of automation**

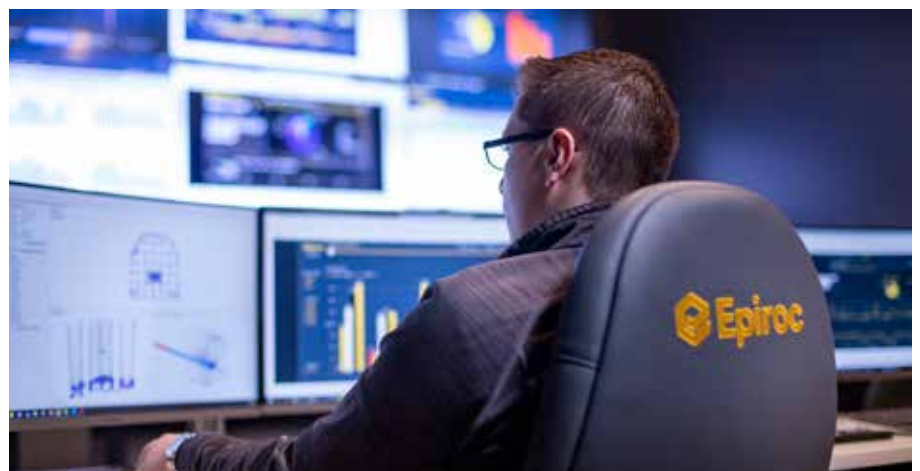
Mining is going digital. New opportunities include digital drill plans and remote production where operators move from the cabin to the control room. However, you still have to change drill bits. The long replacement intervals of Epiroc Powerbit X lead to fewer interruptions in your operations. You get more out of your investments in modern technology.

### **Save hundreds of hours**

As the service life for Epiroc Powerbit X drill bits is extremely long you can, for example, complete a single hole with only one drill bit. The alternative with in-hole bit replacements is time-consuming and quickly adds substantial productivity losses. It is possible to save hundreds of hours by changing to this new technology using buttons protected by diamonds. Let's find out together how much you can save in your operations.

### **Get a consistent result**

Constant hole diameter is essential for efficient and even blasting. When you use a traditional drill bit, the diameter gets reduced over time, leading to smaller and smaller holes. With Epiroc Powerbit X, the diamond-protected buttons keep their shape throughout the lifetime of the bit. You get holes of the same size, every time, improving your blasting quality and drilling equipment life. What is more, the rate of penetration (ROP) is unaffected.





# Use diamonds to cut your CO<sub>2</sub> emissions

The extremely hard surface of Epiroc Powerbit X makes it possible to reduce the amount of CO<sub>2</sub> emissions per drilled meter – by up to 90% (and sometimes more) compared to standard drill bits. Having drill bits that last longer means fewer transports and no need for regrinding.





**Reduce the amount of CO<sub>2</sub> emissions per drilled meter – by up to 90%**

### **Improved life cycle performance**

Lifecycle performance is about using energy efficiently from the cradle to the grave of a product, including the choice of materials and power sources. As Epiroc Powerbit X has a significantly longer bit life than ordinary bits, you get more done with less energy and resources – thereby contributing to improving the lifecycle performance of your mining.

### **Less emissions and toxic substances**

A reduced need for drill bits in your mining operations leads to fewer transports – on the way to your mine and in your mine – and consequently to lower emissions. This also means that you can cut down on storage space. The longevity of Epiroc Powerbit X removes the need for regrinding, which means less waste to take care of.

# Time to change the industry again

Epiroc has pioneered the mining and construction industry many times and these drill bits with diamond-coated buttons, can significantly prolong the replacement intervals. Less exposure to danger for operators, more uptime and lower CO<sub>2</sub> emissions are some of the benefits.

**1973**

First hydraulic rock drill



**1992**

COPROD was launched



United.  
Inspired.

**2019**

Simba Automation.  
Teleremote E-tramming

POWERBIT

**X**

**2022**

Epiroc introduces diamond  
bits for tophammer drilling

**2018**

Boomer E2 battery. Next  
generation battery electric drill rig

Equip your Boomer or Simba drill rig  
with Epiroc Powerbit X for superior  
productivity and increased safety



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