

# RigScan product overview

An advanced audit service product from Epiroc.







# How is your equipment doing today?

RigScan helps you detect problems in time – an audit service for maximum uptime

Regular health checks help prevent unplanned downtime. RigScan from Epiroc is an advanced audit service product that gives you a real time, non-intrusive look at your equipment's condition and performance from the inside. RigScan brings together Epiroc expertise, cutting-edge technology and proprietary data from your equipment. It provides a unique solution to solving downtime and production losses in a sustainable way by identifying potential issues prior to them becoming a problem.

## + Main benefits

**Maximum productivity** and minimal downtime through regular audits of the equipment

**Improved safety**, health and the environment through early detection of potential hazards

**Reduced maintenance costs** through faster troubleshooting

**Extended life** through advanced diagnosis of problems

**Comprehensive performance** analysis lowering operational costs

The number of checkpoints in an audit varies based on the size of the equipment. This illustration shows just a few of them.



## 2. The audit

When the equipment is safe and the work area is secured it's time for the audit. To begin with, the machine is divided into a number of zones. In cooperation with the customer, the RigScan expert works his/her way through, zone by zone, according to the specially designed protocols.

The size of the audit varies based on the size of the equipment, the options it may have and the basic configuration of the machine.



## Potential hazards

Step by step we go through the equipment in order to detect signs of damage or anything that could cause harm to the people in the working area. For instance, identification of internal leaks, pressure blockage, or over pressurization of a valve or pump before they fail, will prevent injuries to anyone around the component.



## 1. Safety first

All audits begin with a thorough safety review in several steps focusing on human safety, visual safety, fluids and critical lubes and working safety. Our RigScan expert is highly familiar with the equipment's safety features and is aware of the risks related to the equipment and the workplace.





## Key components

Different parts of the drill emit different temperature ranges and specific heat signatures, and with a thermal imaging camera, we are able to detect anomalies such as signs of seal leaks, pump leaks, internal leaks and early signs of bearing failures or movements.



## Fluids

To check the condition of the fluids, a particle counter is used. It can be hooked to multiple test points and ran while the equipment is operating. It's like a blood test, detecting dirt in the "blood" that runs through the pumps, valves, compressor and engine.



## Coolers

To get a picture of how well the coolers are working, we use the thermal imaging camera. The images show how effective the hydraulic oil cooler and the compressor oil cooler are shuttling the hot oil through the cores. If they don't, the system will not cool down like it supposed to.



## Hydraulic pumps

To ensure that the pumps are operating at optimum levels, a digital pressure gauge is used. If the pressure is too high it can reduce the life of the pump significantly, depending on how far the pump is pushed past the recommended level.



## 3. Health report

RigScan's standardized global audit protocols provide baseline and benchmark data, based on hard field intelligence. Everything follows the specially designed and standardized global audit available for a number of Epiroc machines.

The inspection protocols are reviewed together with the customer. When the health report identifies a problem or highlights a potential one, we always specify actions needed.

For example, our RigScan expert can advise you whether a part needs to be replaced right away or if it can wait. If there are steps labeled as critical safety or critical performance the advice will be that the failures must be remedied prior to using the equipment again.





# A new standard in equipment audits

Monitoring the condition of a piece of equipment on the spot is now easier and quicker thanks to new technology. By combining our unrivaled expertise with contemporary measuring technology, Epiroc has set a new standard in equipment audits.



## Tablet

Since the audit process is completely digital on a tablet with a camera, many functions are incorporated into a single tool. Additional devices are not needed to capture and store images, videos, parts catalogs or equipment manuals.



## Thermal imaging camera

The thermal imaging camera can identify failures before they occur. It can identify fluid blockage, internal leaks, improper temperature displacement across cooler cores and many other things, to allow for ordering parts and setting up a service call with almost no loss to production.



## Particle counter

Clean fluids are the key to a healthy system. Without clean fluids, valves and pumps will start to fail prematurely because of internal blockage or failure caused by debris in the oil. The particle counter can quickly identify the cleanliness of a fluid based on the specifications set by Epiroc.

## Available for

Surface:				Underground:				
CDM30	Diamec U8	ROC D5 RRC		ST7 Battery	ST1030LP	Boomer 281	Simba L6 C	
DM25	CM760	ROC D7/D7 RRC		Häggloader 10HR	ST14	Boomer 282	Simba M3 C	
DM30	CM765	ROC D9/D9 RRC		Häggloader 7HR	ST1510	Boomer 322	Simba M4 C	
DM45	CM780	ROC F6		MT2000	ST1520	Boomer E1 C	Simba M4 C-ITH	
DM50	CM785	ROC F9/F9 CR		MT2010	ST1530	Boomer E2 C	Simba M6 C	
DML	ECM590	ROC L6-25		MT2200	ST18	Boomer E3 C	Simba M7 C	
DMM2	ECM660	ROC L6-30		MT42	ST2D	Boomer L1 C	Simba M7 E	
DMM3	ECM720	ROC L6-54		MT420	ST2G	Boomer L1 D	Simba ME7	
Pit Viper PV-235	FlexiROC D50	ROC L7		MT431B	ST3.5	Boomer L2 C	Simba S7 C	
Pit Viper PV-271	FlexiROC D55	ROC L8 MK-II		MT436B	ST600LP	Boomer L2 D	Simba S7 D	
Pit Viper PV-275	FlexiROC D60	ROC L8-25		MT436LP	ST7	Boomer M1 C		
Pit Viper PV-311	FlexiROC D65	ROC L8-30		MT5000	ST75Z	Boomer M1 D		
Pit Viper PV-316	FlexiROC T30 R	ROC 460PC		MT5010	ST710	Boomer M2 C		
Pit Viper PV-351	FlexiROC T35/R	SmartROC C50		MT5020	ST7LP	Boomer M2 D		
RD20	FlexiROC T40/R	SmartROC D55		MT54	ST8B	Boomer S1 D		
T3W	FlexiROC T45	SmartROC D60		MT6020	ST8C	Boomer S2		
T4BH	FlexiROC C65	SmartROC D65		MT65	Robbins 73 RH C	Boomer T1 D		
T4W	PowerROC D45	SmartROC T35-11		EST 2D	Boltec 235	Boomer XE3		
TH60	PowerROC D55	SmartROC T40		EST 3.5	Boltec EC	Boomer XL3D		
Boyles C6	PowerROC T35	SmartROC T45		EST 1030	Boltec LC	Cabletec LC		
Christensen CT20	PowerROC T35E	Welldrill 3062		ST1000	Boltec MC	Simba E7		
DHD	PowerROC T45			ST1010	Boltec MD	Simba E7 C-ITH		
Diamec U4	PowerROC T50			ST1020	Boltec S	Simba H1254		
Diamec U6	ROC D3/D3 RRC			ST1030	Boomer 104	Simba H1354		

Please contact your local Epiroc Customer Center for more information.

## United in performance. Inspired by innovation.

Performance unites us, innovation inspires us, and commitment drives us to keep moving forward. Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.  
**epiroc.com**

