Cavity Monitoring System
Optech CMS V500

Revolutionizing the surveying of underground cavities

Hardware
• Fast data acquisition
• In-field resectioning and backsighting
• Completely redesigned hardware
• Communication and power cables removed
• Optional cart-based system

Software
• Real-time lidar and camera visualization
• One interface for all survey functions
• Manual control of sensor
• Laptop-based programming, control and processing
• Universally accepted data formats
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CMS is the ideal scanning solution for dangerous and inaccessible cavities.

The optional cart safely deploys the scanner into bottom-access stopes or drawpoints without exposing the surveyor to loose or falling material. The cart’s rotation mechanism orients the CMS to any given angle, enabling it to maximize data density over the cavity’s primary area of interest.

**Optech CMS V500 Cavity Monitoring System**

Developed for practical operation using real-world experience, Optech CMS has become the standard for fast, reliable and efficient underground surveying with hundreds of systems shipped worldwide. CMS improves mine efficiency and safety by accurately surveying inaccessible or dangerous areas like ore passes, raises and storage bins while the operator stands safely clear. Once inserted CMS measures the cavity’s size, orientation and volume with thousands of laser points, giving surveyors and engineers a crucial look at their mine’s actual structure.

**New V500 Model**

The new Optech CMS V500 builds on the past models by adding new functionality and improving existing features to increase efficiency. The unique integrated camera captures still images and streams video in real time, making CMS a visual inspection tool. With the redeveloped Windows-based interface operators can now control the scanner manually and perform in-field resectioning and backsighting. Optech has completely reworked the physical design to improve efficiency with a reduced 130-mm insertion diameter and a wider 360° × 320° extension angle, and has eliminated external cables through wireless connectivity and an internal battery to improve hardiness and shorten setup times.

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<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
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<tr>
<td>Internal camera</td>
<td>Inspect ore passes, raises, storage bins</td>
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<td>Production of accurate geo-located models</td>
<td>Quantify and minimize dilution</td>
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<td>Multiple environmental settings</td>
<td>Operate in dusty and gaseous atmospheres</td>
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<td>Real-time visualization</td>
<td>Data is field verified</td>
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<td>360° × 320° field of view</td>
<td>Full data coverage in a single scan</td>
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<td>Wi-Fi operation and internal battery</td>
<td>No power or communication cables required</td>
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<td>Cart option</td>
<td>Safely deploy system into dangerous areas</td>
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