

# C-ALS



## Borehole deployable 3D Laser Scanning System

MDL's Cavity Autoscanning Laser System (C-ALS) is a ruggedised 3D laser scanning system. With a diameter of just 50mm, the unit is deployable down boreholes for surveys of underground voids and cavities. The C-ALS measures the three-dimensional shape of the void and its surface reflectivity.

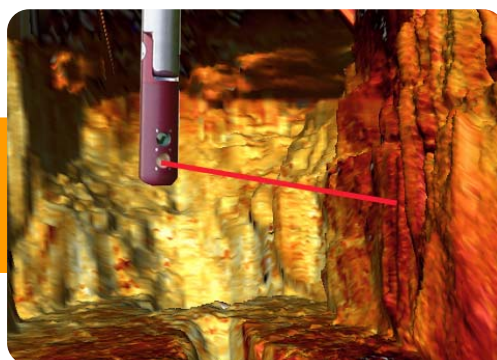
A motorised 2-axis scanning head ensures a complete 360° scan covering the entire void up to a range of 150m.

Along with the scanning head, the C-ALS design incorporates a digital compass as well as pitch and roll sensors. These enable accurate positioning and orientation of the unit itself and the resulting 'point cloud'.

The C-ALS is deployed by cable, but in areas where there is magnetic interference, the C-ALS can be lowered with fibreglass Boretrak® rods which ensure that the scanner's azimuth is constant.

The data telemetry system transmits all measured data back to the surface control unit. A ruggedised PC computer is used for setup, data acquisition and control. MDL supplies software for processing, viewing and editing the data. It can also provide advanced processing software for 3D modelling and analysis of the data.

MDL produced the world's first borehole deployable auto scanning laser system in 1996. Since then, the technology has been proven in hundreds of underground surveys in harsh conditions around the world. The newly redesigned C-ALS gives greater reliability, speed, control and access.



# C-ALS

Cable Connection Point

Digital Compass



## Applications include:

- Void & Cavity Surveys
- Ore Pass Surveys
- Structural Monitoring
- Bunker Surveys

Horizontal Drive System

## System Comprises:

- C-ALS probe & Extension Rod
- Cable
- Power Module

Vertical Drive System

## Features

- 50mm diameter
- Fast Scan (250 points/second)
- Deployment via cable or Boretrak® rods
- Up to 150m range
- 5cm accuracy
- Eyesafe Class 1 Laser
- Rugged stainless steel construction
- Integrated digital compass
- Integrated pitch & roll sensors

Laser Range Finder



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C-ALS/03/05/SLR/v1.0