




RockWatch Robot models:

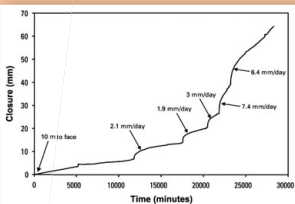
CRT420/3L	For mines with little or no closure. This Robot has 3 levels of flashing lights with the highest warning level starting at 2mm of movement.		0 – 1mm 1 – 2mm > 2mm
CRT420/5L	For mines with some closure. This Robot has 5 levels of flashing lights with the highest warning level starting at 6mm of movement.		0 – 1mm 1 – 2mm 2 – 4mm 4 – 6mm > 6mm
CRT420/7L	For mines with higher closure. This Robot has 7 levels of flashing lights with the highest warning level starting at 10mm of movement.		0 – 1mm 1 – 2mm 2 – 4mm 4 – 6mm 6 – 8mm 8 – 10mm > 10mm

RockWatch Logger system – for ground movement profiling

1 RockWatch Logger

The Logger establishes a profile of ground movement by measuring and recording closure changes at 5 minute intervals.

4 Ground Movement Profile



A Ground Movement Profile is established using closure data from the RockWatch Loggers.

2 RockWatch Grabber



- The Grabber wirelessly extracts data from the Logger.
- The Grabber works from a distance of up to 15m.
- On surface the Grabber is then plugged into the PC to upload data for reporting and analysis.




3 PC and Software



The Software is provided with its own PC and it is compatible with Microsoft Excel.

5 Safety Procedures

Standard Safety Procedures can now be specified for the Robot based on normal and abnormal Ground Movement Profiles.

TRAFFIC LIGHT STATUS	STANDARD SAFETY PROCEDURES
	No action required. Continue monitoring at least once per day.
	Report change to Production Supervisor or Mine Overseer. Production Supervisor or Mine Overseer to re-inspect. Increase monitoring frequency to hourly.
	Report change to Production Supervisor or Mine Overseer who must inspect and take a decision to barricade off the area. Rock Engineer to inspect area as soon as possible and to give clearance to continue working or no entry.