



NOW AVAILABLE  
IN LONG RANGE

# Quarryman<sup>®</sup> Pro

REFLECTORLESS ROCK PROFILING & 3D LASER SCANNING SYSTEM



world leading laser measurement technology



# Quarryman® Pro

Quarryman® Pro is the latest version of MDL's Aggregate and Mining Industry Laser Profiling system currently in use by most major surface mining and quarry service companies worldwide.

Applications include 3D mapping of entire quarry/mine site's, determination of 3D rock face geometry, blast design and volumetric surveying of stockpiles and reserves.

Twenty five years of continuous Quarryman® Pro development and production at MDL have resulted in a product specifically designed for the toughest job and the harshest environments.

Quarryman® Pro is powerful, robust, reliable, easy to operate and very portable. MDL is proud to announce the latest evolution of the Quarryman® product line in the form of the new long range Quarryman® Pro. The Quarryman® Pro LR is now available and can range up to 1200 meters to non reflective surfaces and also has a vertical spot size approximately 10 times smaller than its predecessor. The increase in range and dramatically smaller spot size will allow the operator to collect more detail at longer ranges, thus minimising equipment set-ups and time on station.

Both Quarryman® Pro systems retain the basic manual point and shoot mode, the advanced automatic laser scanning mode (250 points per second) and come standard with a red dot pointer to help target at short ranges in low light conditions.

Quarryman® Pro measures and records millions of data points direct to a compact flash card and does not require external PDA's or computers in the field. The collected data can then be processed by MDL's "Model" Software, or any of the other optional software packages to create incredibly

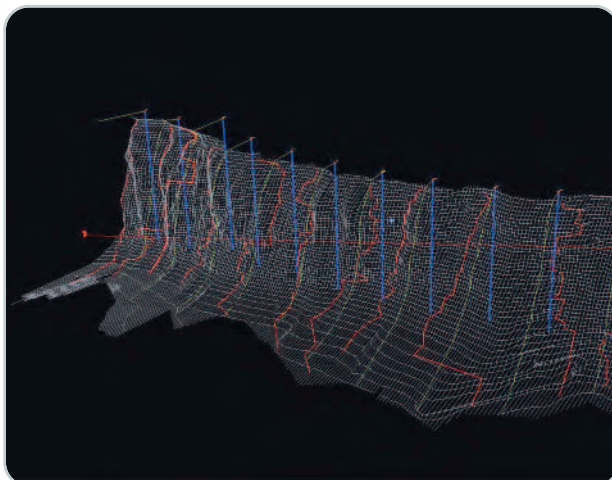


detailed 3D computer models. These models can then be exported to most "CAD Like" software packages for further analysis.

## MDL Face Pro 3D - Blast Design Software

MDL's "MDL Face Pro 3D" software is our current blast design software that allows the Quarryman® Pro users to take advantage of dense data point clouds generated. The software will allow users to design and layout future or existing boreholes. The software will analyse the dense point clouds and calculate the borehole burdens as well as weak burden interactions between boreholes. Driller's reports can also be created to guide the drills to the proper position and characteristics of each hole that is to be drilled.

MDL pioneered the development of integrated rock face profiling and borehole geometry determination when they introduced the Boretrak®, MDL's patented and industry leading borehole survey system in 1987. The survey data obtained from the Boretrak® system can be integrated into the "MDL Face Pro 3D" software for even more accurate blast designs.

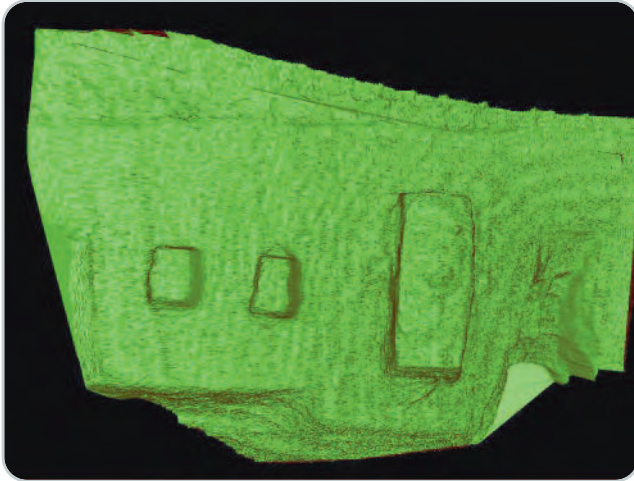


Burden model of rock face

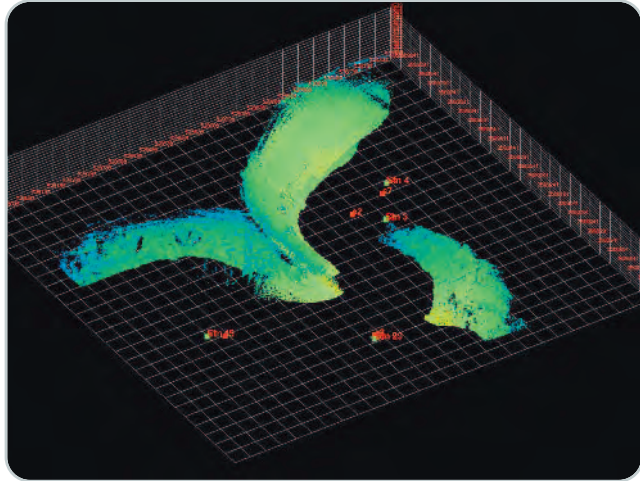
# REFLECTORLESS ROCK PROFILING & 3D LASER SCANNING SYSTEM

## “Model” Software

The Quarryman<sup>®</sup> Pro System comes with MDL's “Model” Software. This software allows the user to perform basic survey operations and generate, edit and export geo-referenced XYZ point cloud data to third party software. Everything from general area scanning to high resolution imaging of structures can be handled with MDL's “Model Software”



High resolution model generated from a scan of a chamber located at the UNESCO site “Fuerte de Samaipata” in Bolivia



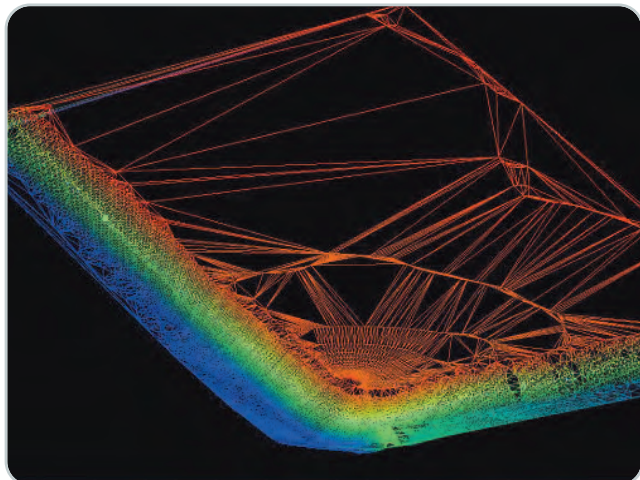
Large scale scans geo-referenced together of Texas Badlands

## “StockAce” Software

MDL's optional “StockAce” Software will allow users to collect multiple stockpiles in the field and produce highly accurate, detailed and individual 3D stockpile models and volumes in the office. This advanced software will allow users to utilise the current advanced features the Quarryman<sup>®</sup> Pro has to offer.



Model of a multiple station setup of a typical stockpile



Triangulation of scan data collected from waste stockpile

## Technical Specifications

	Quarryman® Pro	Quarryman® Pro LR
Laser Classification:	Class 2M FDA / IEC / EN 60825-1 (2001/7)	Class 3R FDA / IEC / EN 60825-1 (2001/7)
Reflectorless Range:	600 m / 2300' on 1m <sup>2</sup> area size @ 90% white reflective card	1200 m / 3800' on 1m <sup>2</sup> area size @ 90% white reflective card
Angular encoder accuracy:	0.01°	0.01°
Angular encoder resolution:	0.01°	0.01°
Accuracy:	5 cm / 1.97 "	5 cm / 1.97 "
Resolution:	1 cm / 0.4 "	1 cm / 0.4 "
Spot Size @ Max Range:	1.38 m x 1.85 m @ 600 m	0.21 m x 2.75 m @ 1200 m
Automated Scan Rate:	250 points per second	250 points per second

### Environmental

Water and dust resistant:	IP66	IP66
Operating Temperature:	-10 °C to 45 °C/14 °F to 113 °F	-10 °C to 45 °C/14 °F to 113 °F

### Power & Dimensions

Power:	DC 12 V (10.5 V DC to 17 V DC)	DC 12 V (10.5 V DC to 17 V DC)
Weight:	8.1 kg / 17.9 lbs	8.1 kg / 17.9 lbs
Dimensions (WxDxL):	410 mm x 239 mm x 177 mm / 6.1" x 9.4" x 7.0"	410 mm x 239 mm x 177 mm / 6.1" x 9.4" x 7.0"
Laser Classification*	<b>CLASS 2M LASER PRODUCT</b>	<b>CLASS 3R LASER PRODUCT</b>

### Quarryman® Pro Applications

- 3D rock face profiling
- 3D mine mapping
- Volumetric surveys
- Drilling and blasting burden determination
- Blast evaluation
- Earth moving and land reclamation surveys
- Tunnel profiling

### Quarryman® Pro Benefits

- Industry leading laser profiling equipment
- Safe, long range contactless surveying of hazardous areas
- Highly portable and one man operation
- Rugged reliability in all environments
- Minimal operator training
- Low cost of ownership
- International service centres

#### For more information:

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\*also available as a class 1, or class 1M laser product



Information contained is believed to be accurate. However, no responsibility is assumed for its use. Technical information is subject to change without notice.

9001/2008 Certified

