

# ULTRA ENVIRO-SYSTEMS (P) LTD.

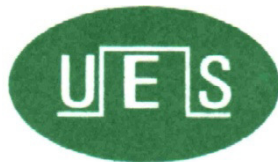


Scientific Rock Blasting means breaking rock using controlled explosive energy in meaningful sizes suitable to the deployed plant & machinery.

\* Rock Blasting is a fine blend of Science & Art

\* *Blaster Artistic Kit* is designed to promote:

- a) Enviro-friendly Blasting
- b) Quality & Blast optimization
- c) Blast Data Management



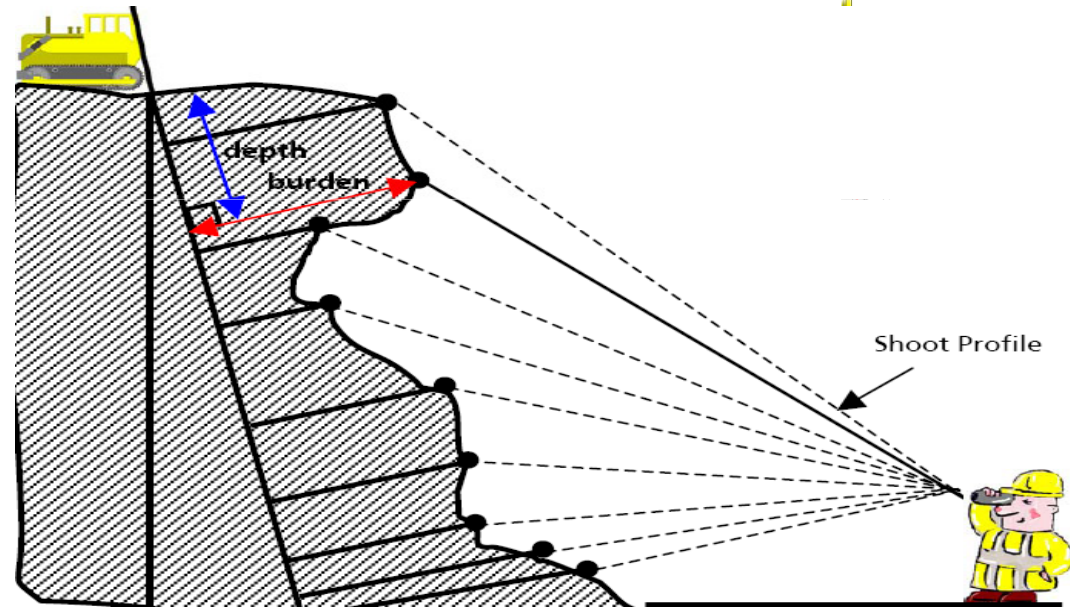
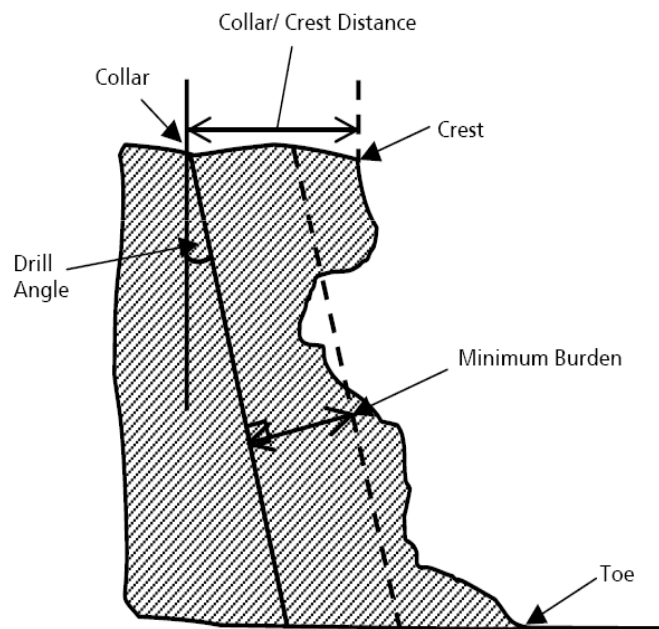
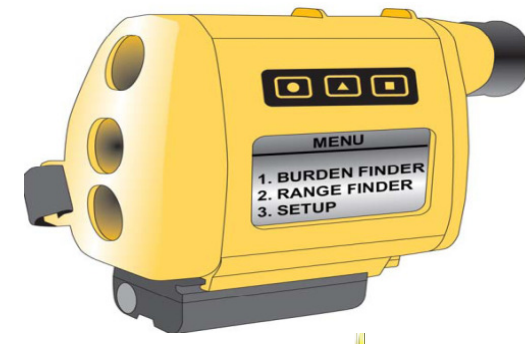
# Blaster Artistic Kit



## Blast Geometry with MDL UK Burden Finder item 1

**\*Finding accurate Bench height**

**\*Accurate Depth-wise Burden assessment**

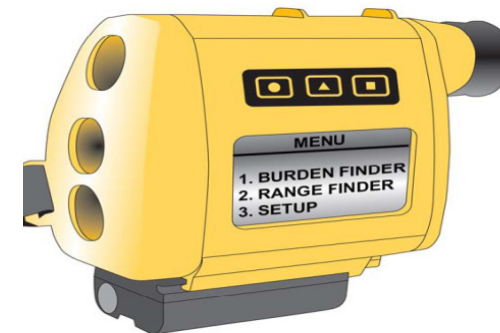


# Blaster Artistic Kit



## MDL UK Burden Finder

### Accurate Depth-wise Burden assessment



Hole Details  
Face 01  
Hole 01  
Drill Angle 10.0D  
Collar 3.00m  
Burden set 3.50m  
Bench Height 6.44m  
Face Angle 19.8D  
PT. BURDEN DEPTH  
1\* 2.88m 0.58m  
2 3.79m 1.52m  
3 3.73m 2.03m  
4 3.57m 2.90m  
5\* 3.48m 3.54m  
6\* 3.36m 4.32m  
7\* 3.24m 5.23m  
8\* 3.16m 5.86m  
9 4.11m 6.73m  
10 4.07m 7.18m  
11 4.71m 7.34m  
--- END ---

+

+ Add Height of observation

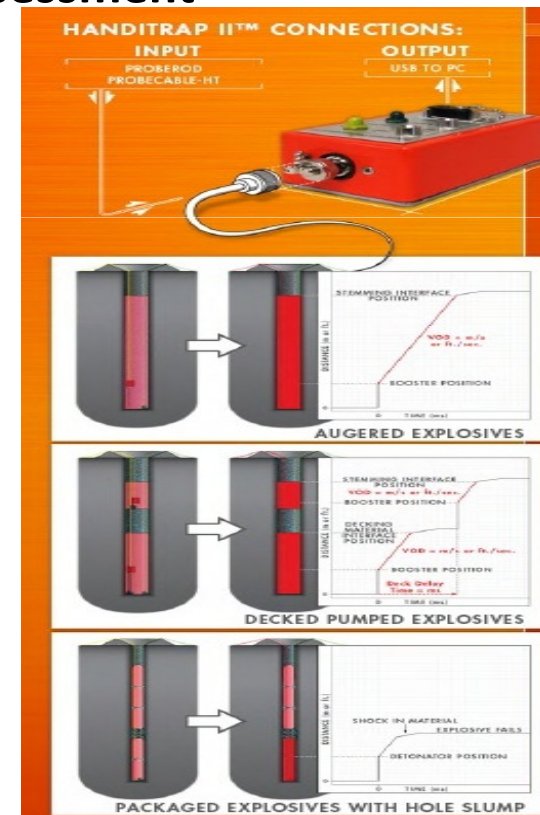


# Blaster Artistic Kit



## Was it my Explosive? In-hole MREL Canada VOD Recorders item 2 'HandiTrapII' and Real Time Digital Display Recorder 'SpeedTrap' with Memory

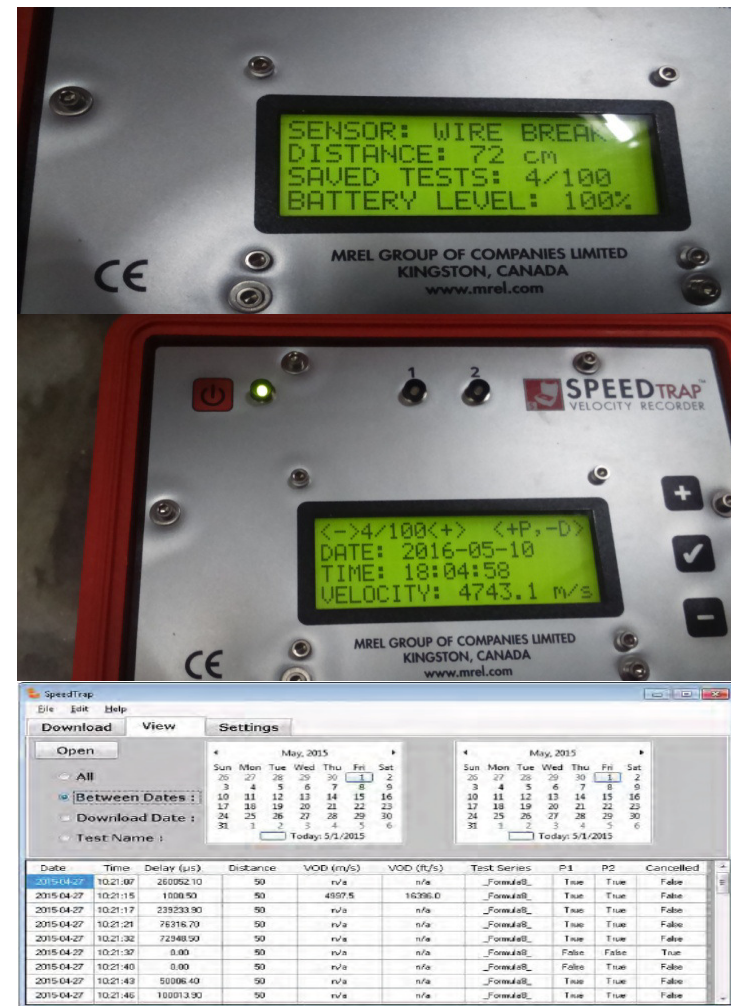
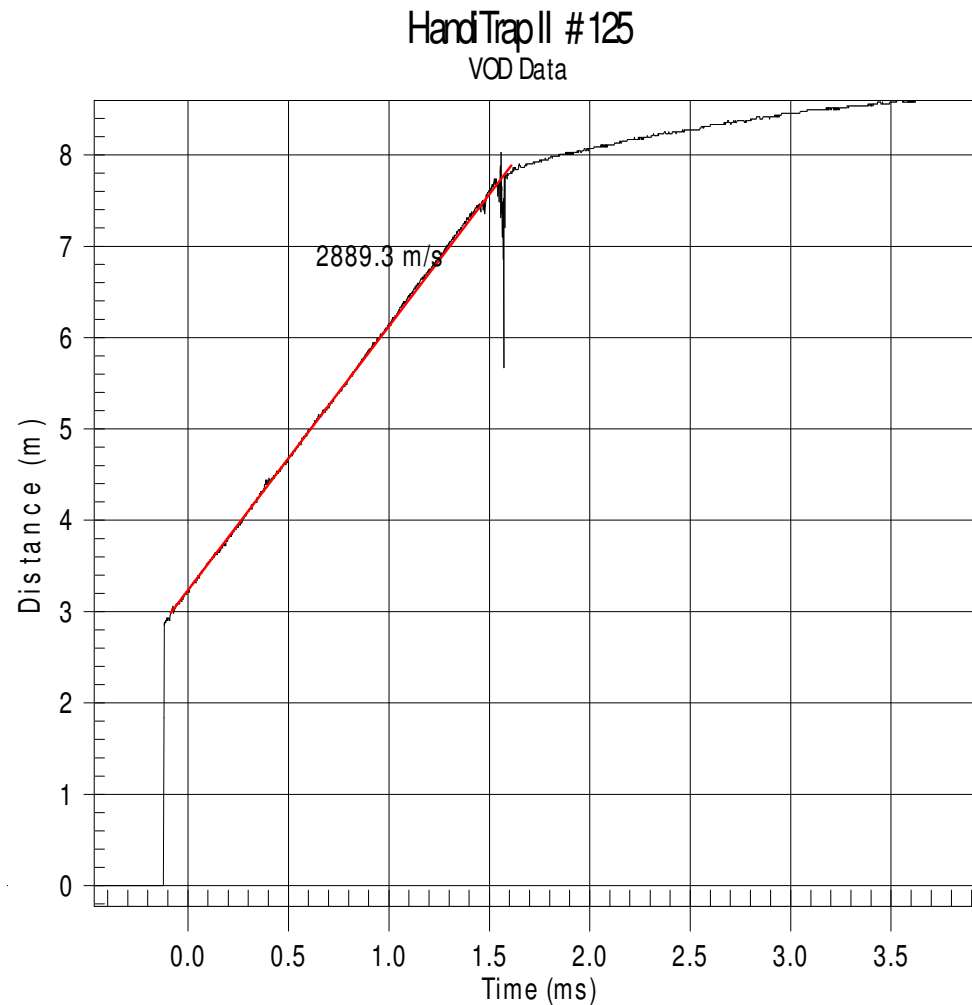
- \* All Types of Bulk, ANFO, Slurry, Cartridge Explosives infield/in-hole VOD (Velocity of detonation) measurements.
- \* Blasting Accessories Delay scatter /actual timing assessment



# Blaster Artistic Kit



## Example of In-hole 'Continuous' VOD measurement using HandiTrapII & SpeedTrap Digital Display Recorder Point to Point VOD



# Blaster Artistic Kit



## Blast Assessment using Vibration Data Instantel Canada “Minimate & Micromate” item 3

Blast Induced Ground Vibration Monitoring  
classified into TWO:

- Near-field Vibration Monitoring  
for Blast Design & Quality study
- Far-field Vibration Monitoring  
for Safety & Structural Damage  
assessment



**Micromate 4000 Events memory for 24x7x365**

**Vibration Monitoring-without interruptions**

- Powerful Battery lithium ion 10-15 days backup
- GPS Coordinates entry
- Pen Drive to copy data
- Light weight 500 gm unit
- User friendly touch screen for semi-skilled user
- Facility to delete false events
- A full display touch screen keyboard makes entry of data and notes convenient and easy etc

**Govt. of India Ministry of Labour & Employment  
Director General Mines Safety Permissible Vibration Standards**

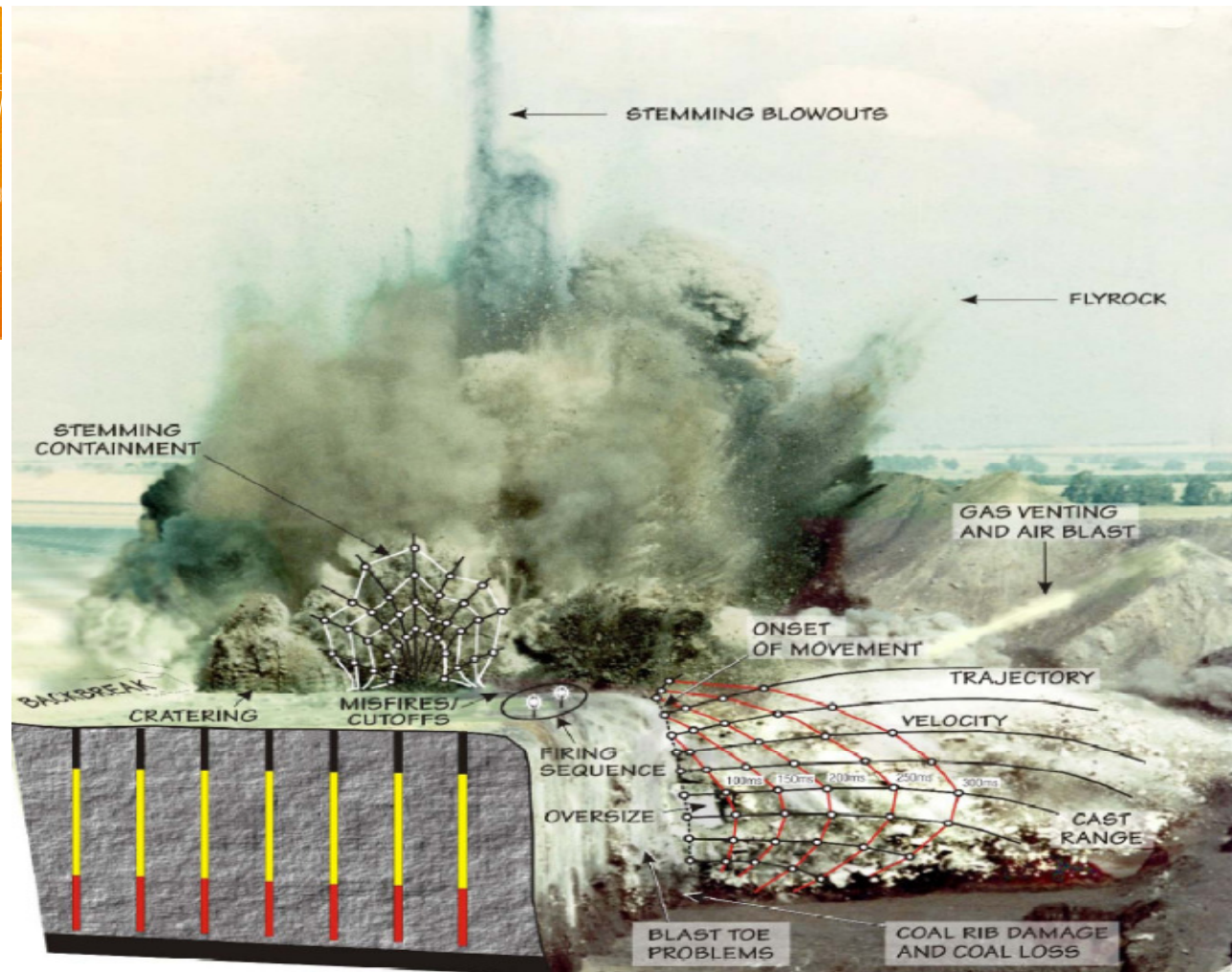
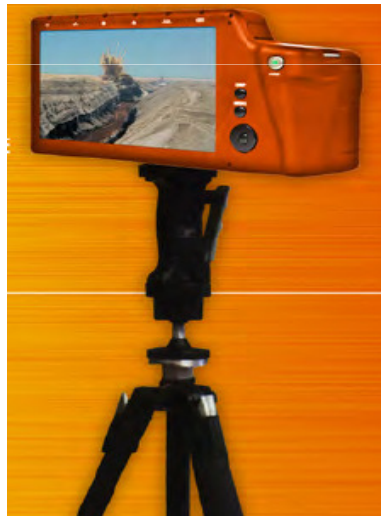
Type of structures	Dominant excitation frequency, Hz		
	< 8Hz	8-25Hz	>25Hz
<b>(A) Buildings/structures not belong to the owner readings in mm/s</b>			
1. Domestic houses/structures Kuchcha, bricks & Cement	5	10	15
2. Industrial building	10	20	25
3. Objects of historical importance & sensitive Structures	2	5	10
<b>(B) Buildings belonging to the owner with limited span of life reading in mm/s</b>			
1. Domestic houses/structures	10	15	20
2. Industrial buildings	15	25	50



# Blaster Artistic Kit



## Seeing is Believing Video Recorder item 4 MREL Canada Blaster's Ranger II High Speed Camera





# Blaster Artistic Kit



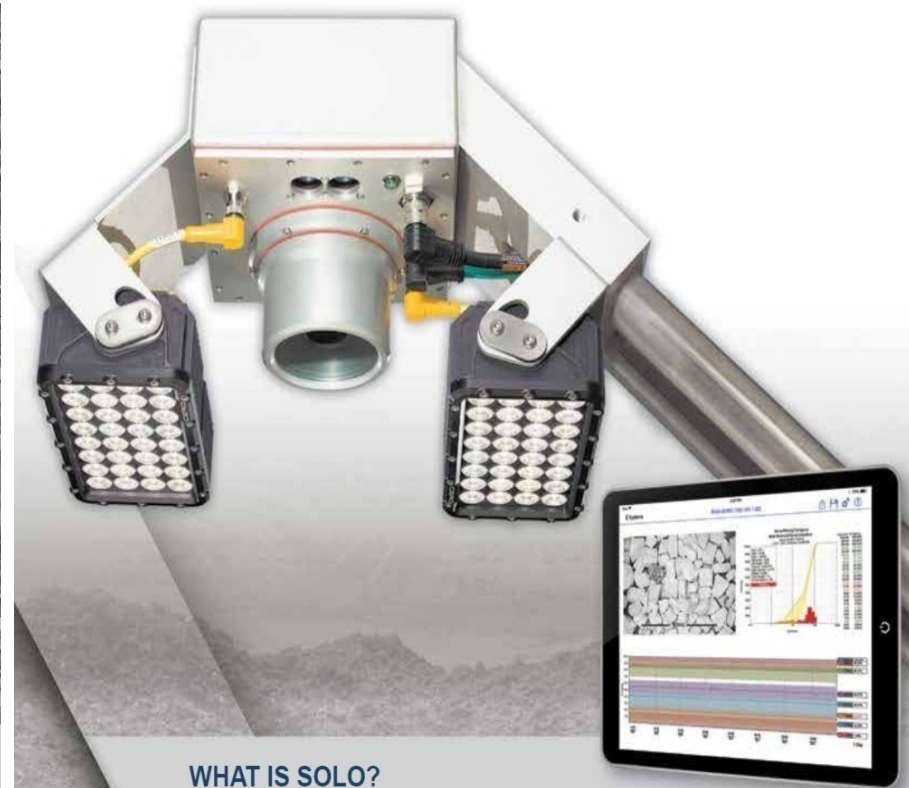
## WipFrag Canada.....iOS item 5

Photo analysis based Fragmentation Analysis is ultimate Blast Quality test tool 'Because you can't manage what you can't measure'...



### WHAT IS WipFrag iOS?

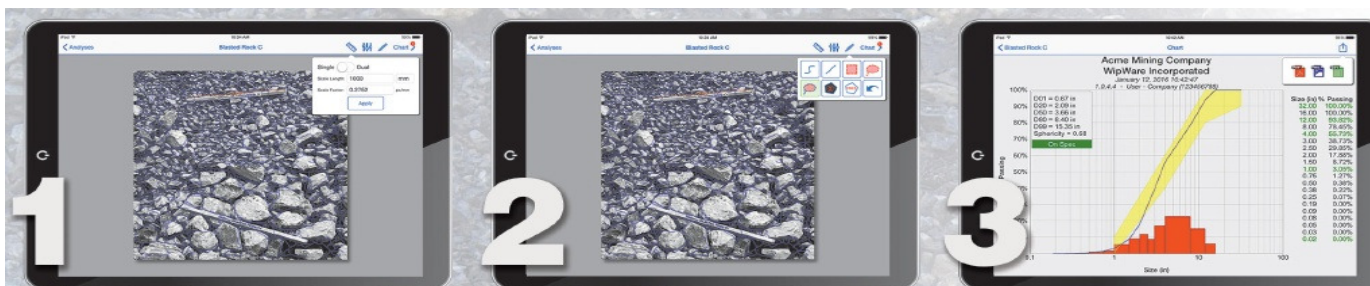
WipFrag iOS is the economical, portable blast fragmentation solution perfect for instantly analyzing blast pile particle sizes in open pit and underground locations using an iPad, or by importing images from other camera devices.



### WHAT IS SOLO?

Solo is a completely automated portable system that measures particle size on conveyor belts in real time providing accurate process information accessible from anywhere in your operation.

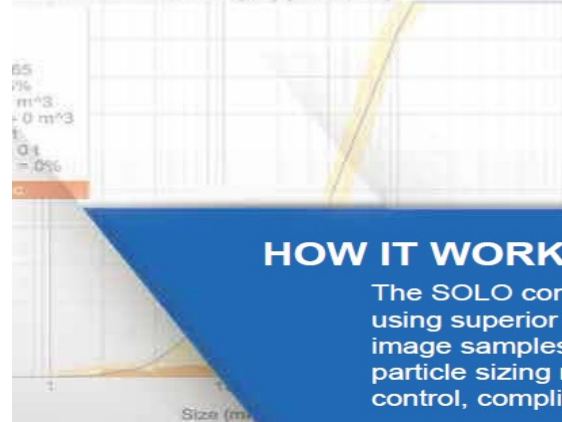
# Blaster Artistic Kit



## HOW IT WORKS

Open an image of the blast pile, analyze the material using industry leading edge-nets and output a distribution curve based on 17 customizable size classes. Includes the unique BlastCast fragmentation prediction module; let WipWare data guide you to better breakage.

Acme Mining Company  
Bulk Material Characterization  
August 10, 2016 14:55:55  
1.0.3.7 - User - Company (123456789)



Size (mm)	% Passing
1000.00	100.00%
500.00	100.00%
300.00	100.00%
150.00	100.00%
125.00	100.00%
100.00	100.00%
75.00	100.00%
50.00	100.00%
40.00	100.00%
37.50	100.00%
35.00	100.00%
31.50	100.00%
25.00	100.00%
18.75	100.00%
15.00	100.00%



## HOW IT WORKS

The SOLO contains an integrated camera, lighting, sensors and CPU using superior edge detection parameters to detect bulk material, collect image samples and provide accurate, continuous and non-disruptive particle sizing results. This production data can be used for quality control, compliance and automation.

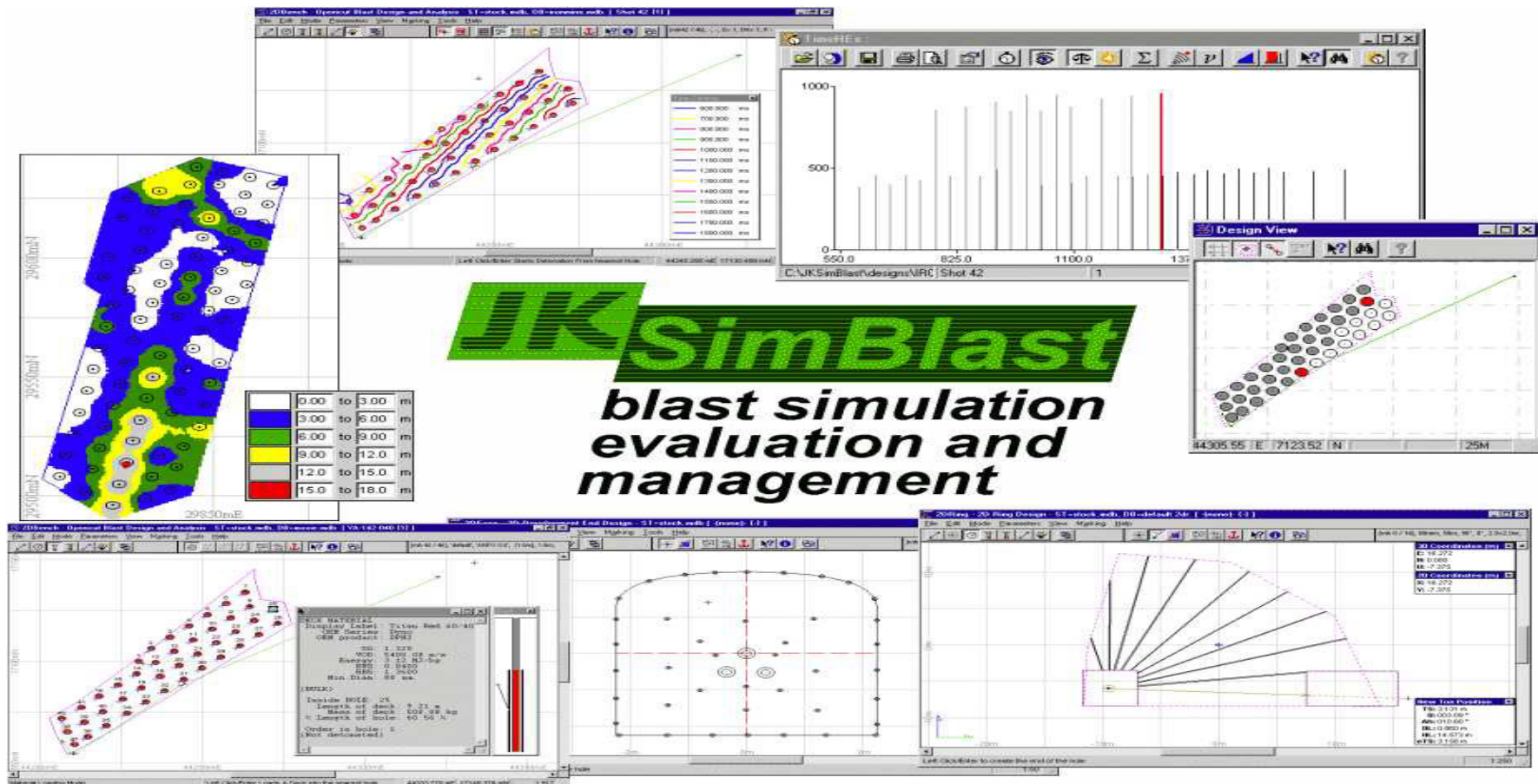
Web link; <https://www.youtube.com/channel/UC3YZpSmXiE9I9GjDutRXXZQ>



# Blaster Artistic Kit



Blast Design on computer can save time, energy & Money SoftBlast  
Australia Software item 6

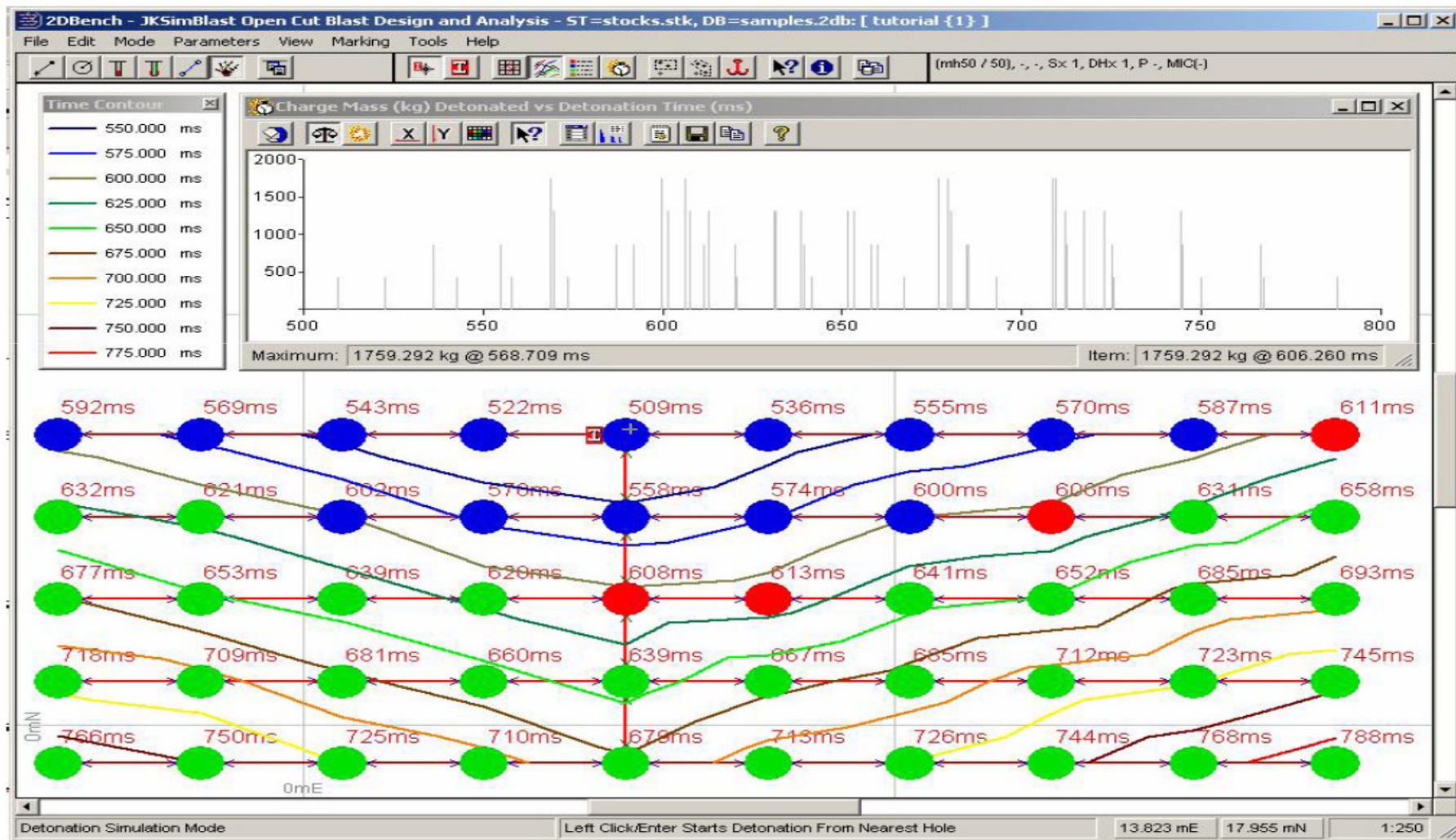




# Blaster Artistic Kit



SoftBlast Australia 2D Bench Software will help to check on Time-Contour, Charge weight detonated vs detonation time, run detonation simulation





# Blaster Artistic Kit



## Bulk Explosive Analyses

## KEY FEATURES



- For use on all bulk explosives containing emulsion (including low density products).
- Determines water and salt content of emulsions.
- Determines ANFO/emulsion ratio of mixed products.
- Calculates oxygen balance for single salt emulsions.
- Reports total water and total salts when the emulsion contains addition substances (e.g. calcium nitrate, urea etc).
- No chemicals required.
- Replaces a laboratory test of more than 4 hours duration with better accuracy.
- Portable and suitable for on-site use (requires 100-240v AC power).
- 5 minutes prep time labour required.





# Thanks for your attention

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