Blast hole plugs

**Contact us to arrange a free trial**

**Blast for less!**

Paraplug®

Is a conic shaped blast hole plug ideal for creating air decks at any depth of the blast hole. It’s innovative and patented design, with the application of an air deck, allows a better distribution of the energy released by the detonation in a way that a greater proportion of it is applied towards rock fragmentation. Also, its conic shape creates a wedge effect guiding more of the blasting energy into the rock rather than upward out of the blast hole. The result is lower explosives consumption, improved rock fragmentation, decreased Fly-rock, reduced noise and vibration levels and savings in drilling costs.

Reduce costs and simplify operations with Paraplug®

Paraplug® is practical, reliable and very easy to deploy. These features make Paraplug® a product that offers huge benefits to drill and blast operations.

**Better blasting results and safer operations**

- Improved rock **fragmentation**
- Lower **explosives** consumption
- Minimization or elimination of **subdrilling**
- Safer blasting due to decreased **Fly-rock**
- Reduced **noise and vibration** levels

**Versatility and simplicity in stemming operations**

- Quick deployment (<20 seconds)
- Easy installation system without the need for any tools or poles
- Easily recoverable in case of incorrect positioning
- Submersible device
- It works in almost any blast hole condition
Paraplug®

- Improved fragmentation
- Less explosives
- Less drilling
- Simpler operation
- Versatility of applications

Lower costs!

Improved fragmentation and less Fly-Rock

Paraplug’s innovative design is ideal for the creation of Air Decks at any depth of the drill hole. Its innovative design allows for a better distribution of the detonation energy so that more of it is applied towards rock fragmentation. Also, its conic shape creates a wedge forcing more of the blasting energy towards the rock rather than upward out of the blast hole (Similar to a "blocked cannon" effect), minimizing fly-rock.

The results are better rock fragmentation and less fly-rock.

Lower explosives consumption and less drilling

Paraplug® can be used at the bottom of the blast hole to minimize or eliminate subdrilling achieving similar results in terms of bench stability, uniformity and improved rock fragmentation.

Paraplug users have reported savings of 33% in explosives consumption and 14% in drilled meters when using our device to create air decks vs. stemming with gravel.

14.2% reduction in drilled meters by 1.000.000 bcms

<table>
<thead>
<tr>
<th>Drilled Meters</th>
<th>No stemming plug</th>
<th>Using Paraplug®</th>
</tr>
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<tbody>
<tr>
<td>16.896 m.</td>
<td>19.713 m.</td>
<td>-14.2%</td>
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33% reduction in BLEND 70/30 (ton) consumption by 1.000.000 bcms

<table>
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<tr>
<th>Consumption</th>
<th>No stemming plug</th>
<th>Using Paraplug®</th>
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<tbody>
<tr>
<td>570 m.</td>
<td>380 m.</td>
<td>-33.3%</td>
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Versatility in its applications

Paraplug® can be used for most blasting applications in open pit mining operations. Its self-supported design allows it to be placed with great accuracy in any rock type and blast hole condition.

Simple and quick operation

Paraplug® can be armed in less than 20 seconds and deployed at any depth in the blast hole without the use off any additional tools.

1. Un-attach the weight box from the disc
2. Fold the disc into a conic shape by aligning the release peg slots
3. Insert release peg into the slots, make sure the peg is facing the center of the disc
4. Un-attach cord reel and latch the cord into the positioning latch
5. Lower the Paraplug® into desired depth guided by the color coded marks in the cord
6. Pull slightly on the cord to level the device
7. Pull on the cord again to trigger the device and fix it into the blast hole wall

Watch a video of Paraplug’s deployment at:
http://www.paraplug.com/operation.html
A simple device:

- Quickly and easily armed
- Easily deployed without the need to use additional tools
- Submersible and can be used at any depth for multilevel blasting
- Recoverable in case of incorrect positioning
- Completely mechanical
- Can be stored indefinitely without any loss of performance
- Absolutely reliable

To achieve:

- Improved rock fragmentation
- Lower explosives consumption
- Less Fly-Rock
- Reduction or elimination of subdrilling
- Increased productivity due to faster loading cycles
- No contamination of explosives with the stemming material
- Lower noise and vibration levels
- Maximum reliability in blasting above and below a mineral layer

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