



SHOTPLUS™ UNDERGROUND

ADVANCED UNDERGROUND BLAST DESIGN FOR COMPLEX BLASTING SCENARIOS



Reduce the overall cost of drill and blast operations



Improve productivity



Improve safety



Facilitate regulatory compliance

SHOTPlus™ Underground's advanced blast design and modelling technologies enable users to design, visualise and analyse complex blast initiation sequences across underground mining applications.

Precision design and visualisation

- A full interactive 3D design environment, to view and edit blastholes from any angle and proximity
- Blast timing tools for advanced electronic blasting systems, delivering greater control over the blast
- Blasting simulation tools highlighting any problems and confirming the timing sequence, before applying to the blast
- Multi-ring views of blasthole profiles, to optimise blasthole positions and check for problems prior to drilling
- Quality Assurance/Quality Control (QA/QC) tools to rapidly check and ensure optimal spacing of all holes
- Ring design editing tools allow collar adjustments and charge modification to be done quickly and accurately

Flexibility

- Import designs and layouts from most mine design software packages
- Load and edit design interactively in 3D or other views
- Import and export templates, allowing streamlining of routine data transfers between software
- Direct interface with Orica's i-kon™ electronic blasting system, including a range of tools to manage loading, timing and initiation, maximising efficiency

Efficiency

- QA/QC tools to rapidly validate and identify design problems
- Easily copy or transfer blast design parameters between holes
- Intuitive interface to deliver complex blast designs quickly and simply
- Automated and customisable reports and loading plans
- Single-click diagnostics show possible misfires, or booster assembly proximity to inert deck interfaces
- Import drifts, stope shapes, geological infrastructure and Cavity Monitoring System data to edit, optimise and customise blast designs

WHO SHOULD USE SHOTPLUS™ UNDERGROUND:

- Drill and blast engineers
- Drill and blast operators
- Blast operations manager
- Underground mining engineers
- Underground mining consultants

SHOTPlus™ Underground delivers the power and flexibility to rapidly design and compare advanced timing scenarios and outcomes.

Interactive 3D design modelling

An interactive 3D environment with a comprehensive range of editing and visualisation tools to assist with the development of firing sequences and ensure optimisation of each blast. Blast patterns can be visualised in any view or in cross-section, with multiple views available to facilitate editing and visualisation of initiation, timing and loading of associated rings.

Advanced timing

SHOTPlus™ Underground provides users with superior capabilities to rapidly and accurately create unique timing sequences for individual subsections of the blast. Changes can be made to timing interactively in the 3D environment and evaluated using the time envelope visualisation. Specialised QA/QC tools validate any changes and reduce the chance of error.

Blast design templates

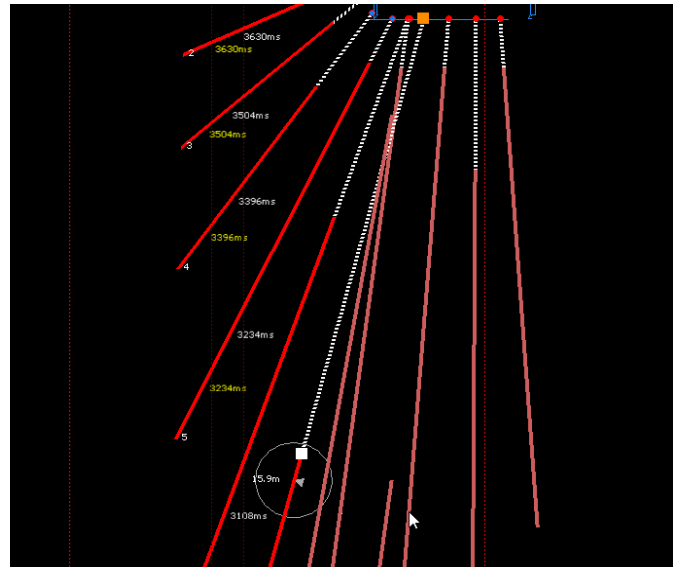
Individual blast design templates can be allocated for separate domains within a mine. Defined parameters can be assigned to a blast design template, based on the domain's specific geological and geotechnical requirements. These templates help to improve management, control and efficiency of each blast.

Reporting

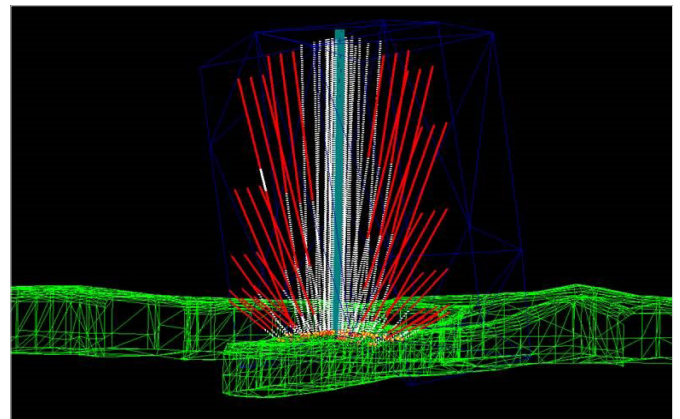
Advanced report templates designed to improve blast quality and productivity can be created. These reports and blast plans can also be customised to suit user requirements, including company specific information.

Compatibility with other hardware and software

Full capability to import hole design and associated attribute data related to material type, hole ID, and hole area from a range of mine planning software.



Ring view with interactive charge geometry and timing adjustment



SHOTPlus™ Underground 3D design environment

To learn more about SHOTPlus™ Underground, please contact your local Orica representative, or visit orica.com/SHOTPlus

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