



# SHOTPLUS™ PREMIER

## BLAST DESIGN AND MODELLING SOFTWARE TO OPTIMISE EVERY BLAST



Reduce the overall cost of drill and blast operations



Improve productivity



Improve safety



Facilitate regulatory compliance

SHOTPlus™ Premier blast design and modelling software enables users to design, visualise and analyse blast drilling, charging, and initiation sequences across surface mining, quarry, and construction applications.

### Precision design

- Full 3D design and viewing environment allows blast patterns to be created relative to surfaces, floors, walls, and face profiles
- Blast timing managed manually or automatically, with conventional pyrotechnic or advanced electronic blasting systems
- Blasting simulations highlighting any problems and confirming the timing sequence, before applying to the blast
- Plan and section views of blast holes and profiles, to optimise blasthole positions and check for problems prior to drilling
- Integration of drilling data, issuing designs to drilling systems and importing actuals for design adjustments
- Calculation tools provide angle of initiation, burden relief and first movement - burden relief tool calculates millisecond relief per metre of burden in the firing direction
- Single-click diagnostics show possible misfires, or booster assembly proximity to inert deck interfaces

### Efficiency

- Loading rules created and saved with specific blasthole parameters, including multiple decks and initiators
- Advanced rules allowing loading designs based on measure while drilling profiles
- A histogram display of nominal blasthole times, allows checking for any overlapping delays
- Automatic assignment of electronic blasting sequences, based on burden relief and desired firing directions
- Auto adjust electronic delay timings to meet desired firing windows for vibration control
- Intergration with Orica's BlastIQ™ suite of products

### Flexibility

- Import designs and layouts from any mine design software
- Create loading sheets in Microsoft Excel or other packages by exporting charging data
- Separate blast files merged into a master blast plan for planning and reporting
- Import and export templates allow streamlining of routine data transfers between software
- Develop logging plans and upload data from loggers and blasters
- Direct interface with Orica's i-kon™ electronic blasting system, including a range of tools to manage blast movement, maximising on-bench efficiency

### WHO SHOULD USE SHOTPLUS™ PREMIER:

- Drill and blast engineers
- Drill and blast operators
- Blast operations manager
- Mining, quarry and civil engineers
- Mining, quarry and civil consultants

SHOTPlus™ Premier is Orica's advanced blast design package, providing design and modelling capability to manage more complex blasting scenarios.

### Blast modelling

Designs can be simulated on a hole by hole basis to predict resultant fragmentation profiles; allowing rapid calibration of fragmentation modelling for improved outcome accuracy when coupled with FRAGTrack™ shovel system.

### Design to surfaces and strata

A detailed geometrical representation of the blast is displayed, including horizons and surfaces in the blast block. Multiple seams can be included in the design for a surface mining application, with up to 24 strata surfaces enabled. View hole-to-hole burdens and spacing at all horizons along blasthole tracks. This advanced design feature can achieve a range of complex blasting objectives, when used in conjunction with specialised products and advice.

### Loading rules

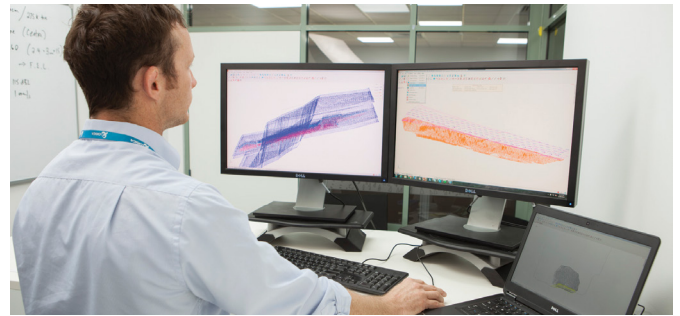
Use an extended range of parameters to develop loading rules, including bench height, burden and spacing, row number, hole parameters (including length, diameter, angle, and type (e.g. pre-split)), segments, or intercepts within a hole. Define a range of tolerances to maintain quality assurance of the blast and identify exceedances.

### Drilling data integration

Design blasts to send to drill systems, and retrieve as-drilled data for detailed comparison to design and adjust loading and initiation parameters. Importing of measure while drilling data allows complex loading rules to be easily created, enabling tailored blast hole charging using as drilled telemetry.

### 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. Large mines with multiple pits can benefit from blast design templates for each pit and separate blast domains within the pit. The templates improve management, control, and efficiency of each blast.



### Advanced timing

Engineers can generate and modify electronic initiation designs efficiently using SHOTPlus™ Premier's electronic timing tools. Initiation times can be assigned hole-by-hole, row-by-row, or to an entire pattern based on the desired direction of movement and burden relief. Where required, multiple directions of movement, or burden relief rates can be applied to a single blast. Initiation times can be adjusted charge-by-charge to optimise the design based on environmental requirements or the desired initiation sequence.

### Visualisation tools

A comprehensive range of visualisation tools to assist with the development of drill plans, loading and firing sequences, ensuring optimisation of each blast. Blast patterns can be visualised in either plan view or in cross-section, with multiple views available.

### Reporting

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

### Integration with BlastIQ™

SHOTPlus™ Premier integrates with Orica's BlastIQ™ suite of products, including LOADPlus™, BlastIQ™ Mobile, and BlastIQ™ Insights. This functionality enables intelligent design choices based on in-field data capture along with near-real time design updates.

### Compatibility with other hardware and software

SHOTPlus™ Premier's file format compatibility enables file imports from a range of sources including mine planning packages, drill systems, fragmentation measurement software, geophysical hole logging, laser profiling systems, and bore tracking hardware. SHOTPlus™ Premier enables the ability to expand from a design application to a complete blast quality management system, synchronised with field operations, when configured as part of the BlastIQ™ Blast Control solution.

**To learn more about SHOTPlus™ Premier or BlastIQ™ Blast Control solution, please contact your local Orica representative, or visit [orica.com/SHOTPlus](http://orica.com/SHOTPlus)**

© 2020 Orica Group. All rights reserved. All information contained in this document is provided for informational purposes only and is subject to change without notice. Since the Orica Group cannot anticipate or control the conditions under which this information and its products may be used, each user should review the information in the specific context of the intended application. To the maximum extent permitted by law, the Orica Group specifically disclaims all warranties express or implied in law, including accuracy, non infringement, and implied warranties of merchantability or fitness for a particular purpose. The Orica Group specifically disclaims, and will not be responsible for, any liability or damages resulting from the use or reliance upon the information in this document.

The word Orica and the Ring device are trademarks of Orica Group Companies.

