

## Simulation Software

**Powerful simulation software to optimise the process and design of mineral processing plants as well as blasting operations.**

**JKTech's broad range of software products cover blast movement, rock fragmentation, comminution, flotation and mass balancing.**

Our significant world-wide sales are testimony to our software products broad application and effectiveness.

Our simulation software includes

- JKSimMet
- JKSimFloat
- JKSimBlast
- JKVBOC
- JKMultiBal

### JKSimMet

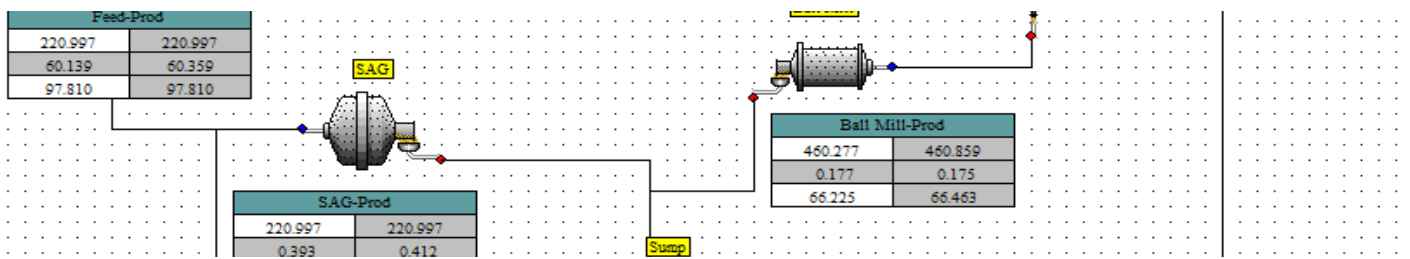
With over 600 licenses worldwide, JKSimMet is an award-winning, general purpose software package for the analysis and simulation of crushing, grinding and classification circuits in mineral processing operations.

JKSimMet integrates all tasks associated with data analysis, optimisation, design and simulation, including the storage and manipulation of models, data and results. It is designed for metallurgists to apply process analysis techniques to optimise plant performance, and design engineers who require process simulation models to assess design alternatives.

JKSimMet allows the user to:

- Build a graphic-based flowsheet of the processing plant
- Mass balance mineral processing circuits
- Calibrate model parameters for the specific equipment in the circuit
- Simulate the effect of changes in operating conditions and flowsheets to predict product flows, size distributions, and other key performance metrics such as power draws; enabling circuit optimisation
- Conduct conceptual flowsheet greenfield and brownfield design studies





JKSimMet v6.3

## JKSimFloat

JKSimFloat is a general purpose software package for the simulation of steady state performance in flotation plant operations.

JKSimFloat integrates tasks associated with data analysis, and circuit simulation in one software package. Fully interactive, it facilitates the display of detailed flotation flowsheets and accompanying information, for easy interpretation of simulation data.

The models behind JKSimFloat have been applied to over 100 flotation operations world-wide in commodities including base metals (e.g. lead, zinc, copper, nickel) and precious metals (e.g. gold, platinum).

JKSimFloat allows the user to:

- Build a graphic-based flowsheet of the processing plant and test its performance
- Analyse batch cell and flotation plant data
- Mass balance on a size by assay and size by mineral basis
- Simulate the effect of changes in flowsheet to predict flows, recoveries and grades

## JKVBOC

JK Value Based Ore Control (JKVBOC) is an engineering tool to simulate and predict blast movement in open pit mining to make proactive decisions.

JKVBOC can be used to evaluate ore loss and dilution in real time, or to perform several pre-blast simulations to evaluate different blast pattern, blast timing and initiation options. The total simulation time lies between 10 and 30 minutes depending on the size of the blast.

JKVBOC allows the user to:

- Model blast movement in a realistic and precise manner
- Run multiple simulations daily to assess alternative blast designs for improving the control of ore loss and dilution
- Model blast fragmentation within a few clicks
- Update the geological block model based on the actual spatial distribution of the blasted material
- Develop digging and blending strategies based on value rather than on grade only

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## JKSimBlast

Award-winning, general-purpose software for blast design, analysis and management.

JKSimBlast covers the design, editing, simulation, analysis and management of blasting in mining and related operations. The main modules are graphical software programs: 2DBench applies to bench blasting in surface mines; 2DRing applies to underground ring blasting; and 2DFace applies to underground tunneling and development. The three modules give engineers and blasting personnel the ability to design and optimise the layout and initiation sequence of almost any type of blast used in mining.

JKSimBlast allows the user to:

- Layout a pattern of blastholes
- Load explosive decks and other materials in the holes
- Install downhole and surface delays, with primer and connection details
- Simulate the detonation on screen
- Import and export data and print the blast

JKSimBlast is distributed through Soft-Blast. Enquiries can also be made through JKTech.

## JKMultiBal

JKMultiBal is a powerful tool for the mass balancing of comminution and flotation circuits and other areas of mineral processing plants.

JKMultiBal allows the user to:

- Build a graphic-based flowsheet of the processing plant
- Mass balance plant data to obtain a reconciled, self-consistent data set for material flows, particle size distributions, assays, size-by-assay and size-by-mineral datasets
- Calculate missing data for streams within the circuit