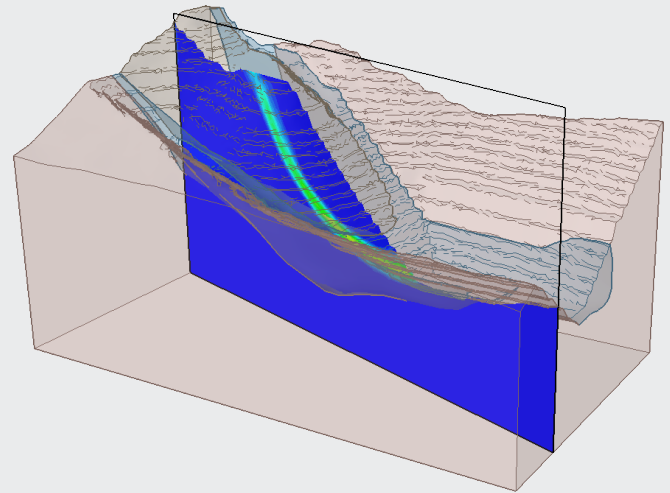


What is RS3?



RS3 is designed for 3D analysis of geotechnical structures for civil and mining applications. Applicable for both rock and soil, RS3 is a general-purpose finite element analysis program for underground excavations, surface excavation, tunnel and support design, foundation design, embankments, consolidation, groundwater seepage, and more.

RS3 offers complete flexibility for staging of excavations, support installation, loading and all other modeling aspects. Models with up to several hundred different stages can be analyzed with RS3.



Fully 3D shear strength reduction analysis.

What's New in RS3

RS3 features significant upgrades and improvements from v1.0, including the ability to import 3D geometries, fully automated Shear Strength Reduction method, dynamic analysis, and more.

Flexible 3D Modeling

The modeling interface for RS3 has been fully redesigned to deliver completely 3D models. This means that users have total freedom in shapes, orientations, surface geometries, and more.

Robust Mesh Capabilities

With increased complexity of geometry and robust meshing capabilities that add accuracy and precision, RS3 allows users to generate mesh with a single click or customize it to user specifications.

Versatile Capabilities & Extensive Materials Library

RS3 is well-suited for both soil and rock and features the same selection of material models as RS2. The vast array of analysis features and material models allow users to model practically any geotechnical problem.

With the added borehole functionality, the creation of complex soil stratigraphy and non-horizontal layers is simple. Using the Borehole Manager tool, users can import borehole log data and apply them to the model.

Powerful Analysis Tools

RS3 includes a number of powerful new advanced analysis tools, including:

- Fully automated Shear Strength Reduction for slope stability analysis
- Improved groundwater analysis to better simulate pore pressure changes
- Dynamic analysis capabilities: simulate a variety of soil models, including earthquake, blast, and machine loading scenarios

Plans & Pricing

Single (Personal) License: Locked to one computer.

- Ownership (Perpetual): **USD \$9995**
Purchased outright
- Lease: **USD \$4995/year**
Leased annually. Incl. maintenance & upgrades

Multi (Flexible) License: Installed on any number of machines. The license file sits on the server.

- Ownership (Perpetual): **USD \$14995**
Purchased outright
- Lease: **USD \$7495/year**
Leased annually. Incl. maintenance & upgrades

Maintenance Plan

To get the most out of your Ownership License of RS3 we recommend the Rocscience Maintenance Plan, purchased annually at 15% of the license cost.

With Maintenance, you get free upgrades to new product versions. You'll never invest in a tool without access to the latest software.

You also get unlimited access to high-quality, timely support from the technical experts at Rocscience.

Contact us at software@rocscience.com

Modeling

- Create 3D models with CAD tools
- Multiple excavations
- Interactive geometry entry
- Vertex/object snapping
- One-click material assignment
- Import 3D .dxf, .dwg, .obj, .stl, .step, .iges, .tin, .asc, .xyz files
- Import from *Examine*
- Export planar section to *RS2*, *Slide2*
- Right-click editing shortcuts
- Interactive sidebar
- Interactive staging timeline
- Tunnel profile tool
- Define soil profile with boreholes

Meshing

- 3D tetrahedral mesh
- 4-noded or 10-noded elements
- One-click mesh generation
- Graded meshing
- Uniform meshing
- Check/define mesh quality
- Define mesh refinement region

Materials

- Soil or rock
- Elastic or plastic
- Multiple materials
- Mohr-Coulomb, Hoek-Brown, Drucker-Prager, Generalized Hoek-Brown, Cam-Clay, Modified Cam-Clay, Discrete Functions, Mohr-Coulomb with Cap material models
- Softening hardening model
- Staged material properties
- Datum-dependent properties
- Import from *RocData*
- Linear isotropic, transversely isotropic, orthotropic, Duncan-Chang Hyperbolic, non-linear isotropic, custom
- User-defined material models library, including ChSoil, CySoil, Harding Soil and Hardening Soil with Small Strain Stiffness

Groundwater

- 3D finite element seepage analysis
- Steady state or transient
- Staged groundwater
- Material permeability functions
- Discharge sections
- Piezometric lines
- Pore pressure point set
- Coupled/uncoupled analysis
- Add water surface by location
- Add pore water pressure point set by location

Support

- Bolts
- Liners
- Beams
- Forepoles/piles
- Staged support installation
- Bolt types – end anchored, fully bonded, cable bolts, Swellex, split-set, tiebacks
- Composite liners with interface elements
- Elastic or plastic
- Peak/residual strength

Compute

- Parallel 64-bit processing
- Fully optimized
- Direct or iterative solver
- Coupled stress/pore pressure using Biot theory

Far-field Stress

- Constant stress field
- Gravity stress field
- Stress field per material

Finite Element Slope Stability

- Automated FE slope stability using shear strength reduction (SSR) method
- Define SSR include area
- Define SSR exclude area
- Documentation including verification models and tutorials

Loads

- Point load
- Line load
- Distributed load
- Ponded water load
- Staged loading
- Springs
- Seismic loading
- Dynamic analysis

Data Interpretation

- 2D/3D view
- Plot contours on horizontal, vertical or arbitrary planes
- Plot contours on boundaries
- View stress, displacement contours
- Effective stress, pore pressure contours
- Contour user-defined data
- Deformation vectors
- Groundwater discharge vectors
- Display deformations to userdefined scale
- Query and graph material, support data
- Show values directly on model
- Highlight yielded material and support elements
- Display isosurfaces
- Data tips for any object
- Annotation and dimensioning tool kit
- Export to Excel
- Export image files