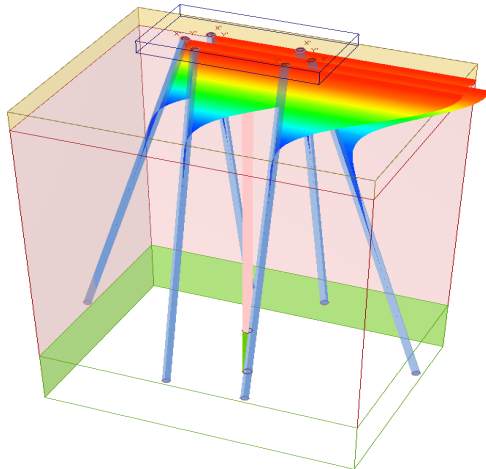
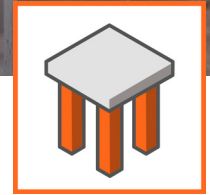


# RSPile

## 3D Pile Analysis



Model and analyze groups of piles

### What is RSPile?

RSPile is a general pile analysis software for analyzing driven, axially loaded piles and laterally loaded piles. It is capable of computing the axial capacity for driven piles as well as the pile internal forces and displacements under various loads and soil displacements. RSPile can also compute pile resistance forces for use in Slide2 for enhanced slope stability analysis.

### What's New in RSPile

- New loading feature allows loads to be applied to a specific point along the length of the pile, instead of only at the top.
- Linearly distributed traction loads can now be applied to piles by specifying depths and load values at the top and bottom
- Users can now regroup piles patterns by selecting piles to be regrouped and assigning the new group properties to a chosen pile within that group.
- In the Concrete Designer, users can now specify a length for their casing if their pile is not fully cased.
- User can now specify the depth of reinforcement patterns and their lengths within the pile.

### Integration with Slide2

The compatibility of RSPile with Slide2 is one of its most important features. Pile resistance graphs generated in RSPile can be imported into a support type in Slide2 and used in a slope stability analysis:

- Pile properties are defined in RSPile, which computes the mobilized lateral and/or axial resistance along the length of a pile, for a given soil geometry and loading conditions.
- The pile support force used in the Slide2 analysis is then determined by the location and angle of the slip surface intersection with the pile.

Find more details: [rocscience.com/software/rspile](http://rocscience.com/software/rspile)

### Plans & Pricing

**Personal License:** Locked to one computer.

- Lease: **USD \$695/year**  
Leased annually. Includes Maintenance+.
- Perpetual: **USD \$1,295**  
Purchased outright. Includes 12 months of Maintenance+.

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

- Lease: **USD \$995/year**  
Leased annually. Includes Maintenance+.
- Perpetual: **USD \$1,895**  
Purchased outright. Includes 12 months of Maintenance+.

### Maintenance+

Maintenance+ is our enhanced maintenance and support services subscription, purchased annually at 20% of the license cost.

With Maintenance+ Continuous Software you get access to all feature releases, enhancements, and bug fixes throughout the year and as soon as they're available. You also have access to convenient License Services, the support of our experts, and exclusive learning offerings.

Contact us at [software@rocscience.com](mailto:software@rocscience.com)

## Axial Capacity of Driven Piles

- Adhesion types
  - Adhesion for cohesive soils
  - Piles driven through soft clay
  - Piles driven through overlying Sands or sandy gravel
  - Piles without different strata
  - User-defined adhesion
- Calculated capacities
  - Restrike, driving, ultimate
- Design considerations
  - Long and short-term scour
  - Soft compressible soils
  - Negative skin friction
- Non-tapered pile types
  - Pipe—open and closed end
  - Concrete
  - H-Pile
- Soil materials
  - Cohesive / cohesionless
- Tapered pile types
  - Timber
  - Raymond uniform taper
  - Monotube

## Axially Loaded Piles

- Axial resistance analysis
  - Max allowable axial displacement
  - Ultimate axial resistance
- Pile top loading
  - Axial
- Pile Types
  - Cylindrical
  - Rectangular
  - Pipe
  - Common sections
  - Tapered or non-tapered
  - Reinforced concrete
  - Prestressed concrete
  - Elastic or plastic
- Soil materials
  - Elastic
  - API sand
  - API clay
  - User-defined
  - Drilled clay

- Drilled sand
- Coyle Reese Clay (driven)
- Mosher Sand

## Laterally Loaded Piles

- Additional loading
  - Loading by lateral soil movement
  - Transition zone for sliding soil in lateral resistance function
  - Lateral resistance function (multiple soil movement cases)
- Advanced computation options
  - Stiffness matrix calculator
  - Pushover analysis
  - Pile length vs top deflection
- Group analysis
  - Cap designer
  - Radial, rectangular, custom patterns
- Pile toe loading
  - Shear resistance
  - Lateral resistance analysis
  - Max allowable lateral displacement
  - Ultimate lateral resistance
- Pile top loading
  - Moment in X and Y
  - Shear in X and Y
  - Slope in X and Y
  - Rotational stiffness in X and Y
  - Deflection in X and Y
  - Axial load
  - Define any combination of loading
  - LRFD combinations
- Pile types
  - Cylindrical
  - Rectangular
  - Pipe
  - Typical sections
  - Elastic and plastic
  - Reinforced concrete
  - Prestressed concrete
  - Pile with casing/core
  - Tapered or non-tapered
- Soil materials
  - Elastic
  - Soft clay soil
  - Submerged stiff clay
  - Dry stiff clay

- Sand
- Weak rock
- User-defined
- API method for sand
- Loess
- Liquefied sand
- Piedmont residual soils
- Strong rock (vuggy limestone)
- Modified stiff clay without free water
- Silt (cemented C-Phi soil)
- Soft clay with user defined J
- Hybrid liquefied sand
- Massive rock
- Output
  - Displacement X and Y
  - Rotation X and Y
  - Beam shear force X and Y
  - Beam moment XY and YZ
  - Soil reaction force X and Y
  - Soil stiffness X and Y
  - P-Y curves with depth
  - Use any input parameters as random variables

## Model Definition

- Boreholes to define stratigraphy
- Definition of multiple and pattern piles

## Additional Features

- Full 3D FEM pile engine
- P-Y modification factors
- T-Z modification factors
- Q-Z modification factors
- Static and cyclic loading options
- Integration with Slide2
- Export to Slide2
- Export to Excel
- Info Viewer