Interactive Roark’s Formulas

Long considered the leading authority on structural element design and analysis, Roark’s Formulas for Stress and Strain has been helping engineers solve design problems for more than 60 years.

Universal Technical Systems, Inc. (UTS) takes it one step further with Interactive Roark’s Formulas—a fully interactive version of the landmark reference combined with powerful problem solving technology that dramatically reduces design hours and production costs and speeds time to market. Imagine not just words and formulas on a page, but completely automated stress analysis of a comprehensive range of structural components—right on your desktop!

Proven and Powerful

Interactive Roark’s Formulas has been thoroughly user–tested and in continuous use since 1989. It includes interactive calculations for all cases and tables with accompanying diagrams that help streamline the design process and reduce design iterations as well as the need for complicated finite element analysis. In addition, International System of Units (SI) and United States Customary Units (USCU) conversion is automatic with Interactive Roark’s Formulas, making model sharing easier than ever.

The user–friendly menuing system lets you select a problem by chapter, table, and case—exactly as it is in the book. However, here’s where the similarities end. Pre–formatted plots of deflection, stress, and bending moments let you refine the design like never before. What’s more, a powerful math engine with the unique ability to solve for a variety of combinations of input and output variables—known as backsolving—allows you to easily test what–if scenarios and optimize designs without hours of tedious calculations or programming. Just point, click, and solve.

Interactive Roark’s Formulas at a Glance

• Interactive Calculations—for all cases and tables
• Dynamic Plot Annotations—for data analysis and visualization
• Full Materials Database—for streamlined data entry
• Automatic Unit Conversion—for model sharing flexibility
• Report Wizard—for on–demand custom reporting
• Solution Optimizer—for advanced control over constraints and bounds

Bottom Line: Interactive Roark’s Formulas gives you the ability to tackle design challenges that would otherwise be too complicated or costly to attempt.

A Designer’s Dream

Interactive Roark’s Formulas includes a number of built–in functions and ease of use features like the Superposition Data Entry Wizard that allows multiple loads to be handled easily by automatically calculating and displaying plots of stress, deflection, and shear for the combined loads every step of the way. What used to take hours now takes a matter of minutes!

When first released in 1989, Roark’s Formulas for Stress and Strain co–author Warren Young called Interactive Roark’s Formulas “a designers dream.” In reality, it’s an indispensable tool for any designer, engineer, or technician that works with beams, columns, plates, rings, tanks, or pressure vessels.

Interactive Roark’s Formulas is available in a Standard and Premium edition that includes the Solution Optimizer, and supports Microsoft® Windows 2000 and XP platforms.

About Universal Technical Systems, Inc.

Universal Technical Systems, Inc., established in 1984, is the leading provider of high–productivity problem–solving software products and custom developed solutions. With headquarters in Rockford, Illinois and subsidiaries in the UK and India, UTS serves customers worldwide. For over twenty years UTS has focused exclusively on providing solutions that help companies in the scientific, engineering, operations research and management, and financial communities simplify complex calculations and streamline the processes that drive their businesses. UTS products and custom solutions are available for desktop and web use.

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