

civil engineering library for mathcad®

Deliver powerful civil engineering resources to your desktop for easy access

PRODUCT OVERVIEW

The Civil Engineering Library brings together three best-selling Mathcad E-books on a single CD.

THE CIVIL ENGINEERING LIBRARY FOR MATHCAD INCLUDES:

Roark's Formulas for Stress and Strain, 6th Edition - Receive the complete edition, with more than 1,000 separate design cases covering straight beams and bars, curved beams, plates and shells. Also included are all 37 tables of formulas in Roark's and more than 75 detailed example problems worked out in Mathcad.

Sample Topics - Column buckling and elastic stability; stress, force and deflection calculations for beams; combined stress formulas; curved beam cross-section properties; moments of inertia; torsional loading; beam analysis for a varying section; stresses and deflection of flat plates; discontinuity analysis results at the junction of shells and plates; natural frequencies of plates; bending and membrane stresses of thin-walled pressure vessels; radial displacements; buckling of shells

Building Thermal Analysis - This E-book couples real-life examples of building thermal design problems with theory to create an informative group of design documents. The E-book is an extremely useful design tool for engineers and architects who analyze heat transfer in buildings.

Sample Topics - Steady state heat conduction in multi-layered walls and pipes; transient heat conduction in building; analysis of heat conduction in walls; periodic heat flow in multi-layered walls; convection and infiltration in rooms and cavities; solar radiation; psychometry and thermal comfort

Building Structural Design: Reinforced Concrete and Structural Steel Applications - This E-book offers useful Mathcad problem-solving techniques in the context of common design calculations from several different branches of electrical engineering, such as circuit analysis or digital filter design. These applications use Mathcad's complex arithmetic, matrix operators, equation solving power and plotting capabilities to provide a reference source of Mathcad methods and formulas.

Sample Topics - Analysis of simple beams and beams with end moments; section properties of composite steel beams; structural steel and reinforced concrete columns; effective length factors; reinforced concrete flat plates; spread footings and pile caps; retaining walls and anchored bulkheads; shear stud capacities

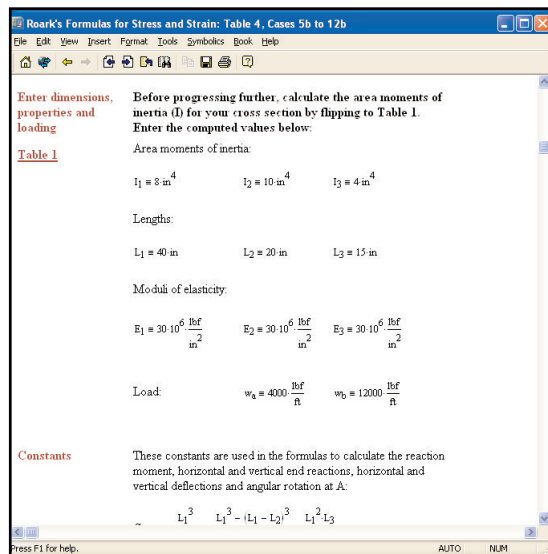


Figure 1. The Civil Engineering Library includes Roark's Formulas for Stress and Strain.

WHAT ARE MATHCAD E-BOOKS?

Mathcad E-books give you interactive “live” access to what would otherwise be hard copy reference books. Because the books are electronic, you get all the features you would expect from an electronic reference tool, such as hyperlinks, browsing and full word search. Plus, these books deliver unique benefits because you read them in Mathcad, with full access to all of Mathcad’s calculation and graphing features. As you change parameters and definitions, Mathcad recalculates. Modify the algorithms to build your own models, explore the content by working directly in the book or drag content into your own Mathcad worksheets.

SPECIFICATIONS

System Requirements

- Mathcad 12 or higher
- Windows® XP, 2000 or higher
- 125 MB of disk space (if installing to hard drive)

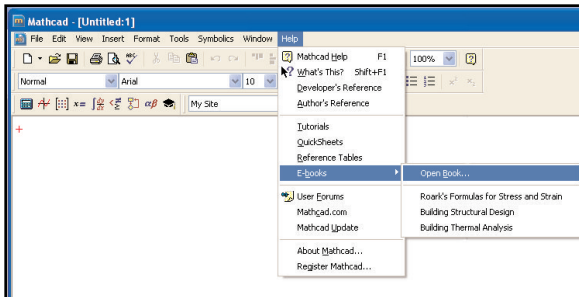


Figure 2. Mathcad E-books provide “live” access to hard copy reference books, and offer features such as hyperlinks, browsing and full word search.



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