EN-1993-1

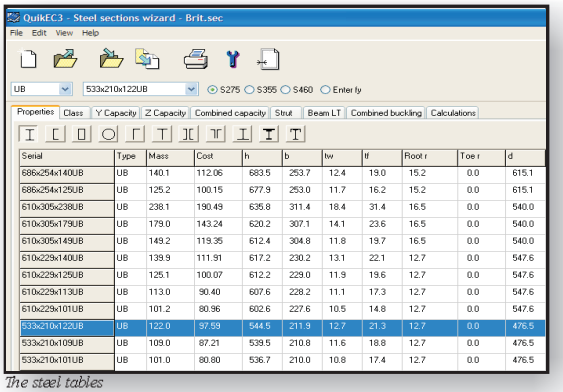
quik EC3

quikEC3 is a unique program which addresses the need for simple, effective and low-cost software for steel design to EN-1993-1 (EC3). It is based on the popular MERLIN package which first introduced the concept of the 'electronic blue book'. Extensive research and development has produced an everyday practical tool which is also a powerful aid to learning the Eurocode. All the more difficult Eurocode concepts have been incorporated to ensure that it offers a comprehensive and versatile solution capable of addressing a wide range of section profiles.

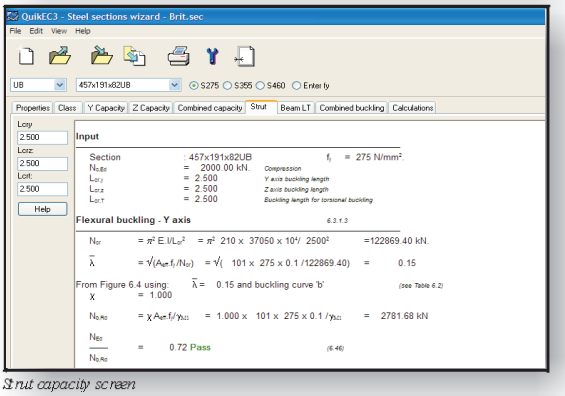
Fundamental to the operation of quikEC3 is its set of steel tables (shown right). We provide UK, EC, USA and Japanese sections but the user can add simple and compound sections of his own. All relevant EC3 properties are calculated and presented in familiar looking tables. quikEC3 handles the widest range of section shapes you will find - a complete list is overleaf. Useful 'tool-tips' compare BS5950 and EC3 terminolgy aiding the transition to the new code.

But it doesn't stop there. Just click the 'Class' tab and input an axial force. The section classification and effective properties are immediately calculated. Click the 'Y capacity' tab, add shear and moment - the major axis capacity checks are carried out. Work through the remaining tabs adding any additional data and you will have a complete set of calculations. Loop backwards and forwards trying 'What if' scenarios - it's all very, very fast.

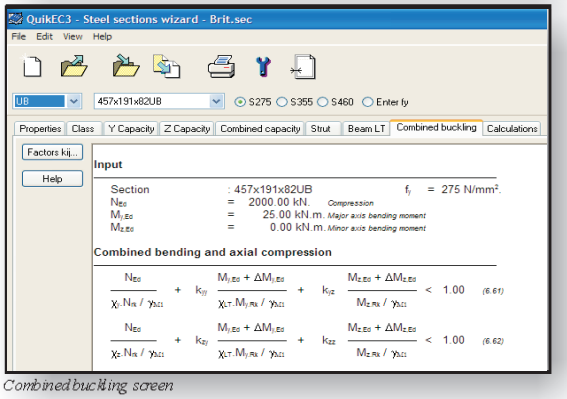
The output calculations are detailed, very clear and fully annotated with EC3 clause refererences. Ideally suited to the EC3 training environment, they're also very checking Engineer friendly.



The steel tables



Strut capacity screen



Combined buckling screen

- **Electronic steel tables to EN-1993-1**
  Comprehensive and extendable steel tables including compound and custom sections. UK, EC, USA and Japanese sections included.
- **Ideal Training Tool for EN-1993-1 design**
  Cross-references between BS5950 and EN-1993-1 terminology. Detailed section capacity checks with fully annotated calculations.
- **Section Classifications and effective properties**
  Includes class3 (semi-compact) and class4 (slender) for a wide range of section shapes.
- **Detailed Section Checks**
  Capacity, axial, moment, shear, buckling, LT buckling and combined checks
- **Very Clear Output**
  Fully detailed calculations output showing equations used and EN1993-1 clause references.

Full Technical Details overleaf

To evaluate quikEC3, please visit our website at www.gtscad.com or call the number below for a free CD. The evaluation software is time limited but is otherwise fully functional. Take a look at the other programs in the QUIKSOFT library: QUIKFRAME xp - graphical frame analysis with optional steel and timber design, QUIKPORT xp - the ultimate portal program, QUIKJOINT - the most comprehensive connections program, QUIKBEAM - the project-based steel beam program and MERLIN - a BS5950 version of quikEC3.

Product Data

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GTS

Scope

quikEC3 is a program which calculates section properties of common structural steel shapes and presents these properties in conventional tabular form, i.e. as a set of steel tables. Using these properties and working in accordance with EN-1993-1 (EC3), it then carries out a series of section capacity checks (detailed below) thus forming a simple but effective steel design tool. Fully detailed calculation output makes the program eminently suitable for Engineers wishing to prepare for the imminent introduction of EC3 in the UK. The program will link to future EC3 versions of the QUIKFRAME, QUIKPORT, QUIKJOINT and QUIKBEAM programs.

Applicable Code

EN-1993-1, UK National Annexe

Units

Metric SI only

Grades of Steel

S275, S355, S460, User defined

Types of Section

Supplied Steel Tables

British standard sections:
UB, UC, RSJ, UBP, HF-CHS, HF-SHS, HF-RHS, CF-CHS, CF-SHS, CF-RHS, RSA, TEE (from UB/UC), 2-RSC (compound channels), 2-RSA (compound angles), PFC, 2-PFC (compound PF channels), ASB (asymmetric beams), SFB (Slimflor beams), UB/PFC (Gantry Girders)

Euronorm parallel flange beams:
Euro HE, HL, HD, HP, IPE

American sections to ASTM specifications:
American W Shapes in accordance with ASTM A6/A6M

Japanese sections:
Japanese wide flange shapes

Custom Steel Tables

The user can create any number of custom sections and section table files. Sections can be totally new sections of the supported shapes (above) or based on existing sections. Sections can be combined to form compound/built-up sections.

Section checks

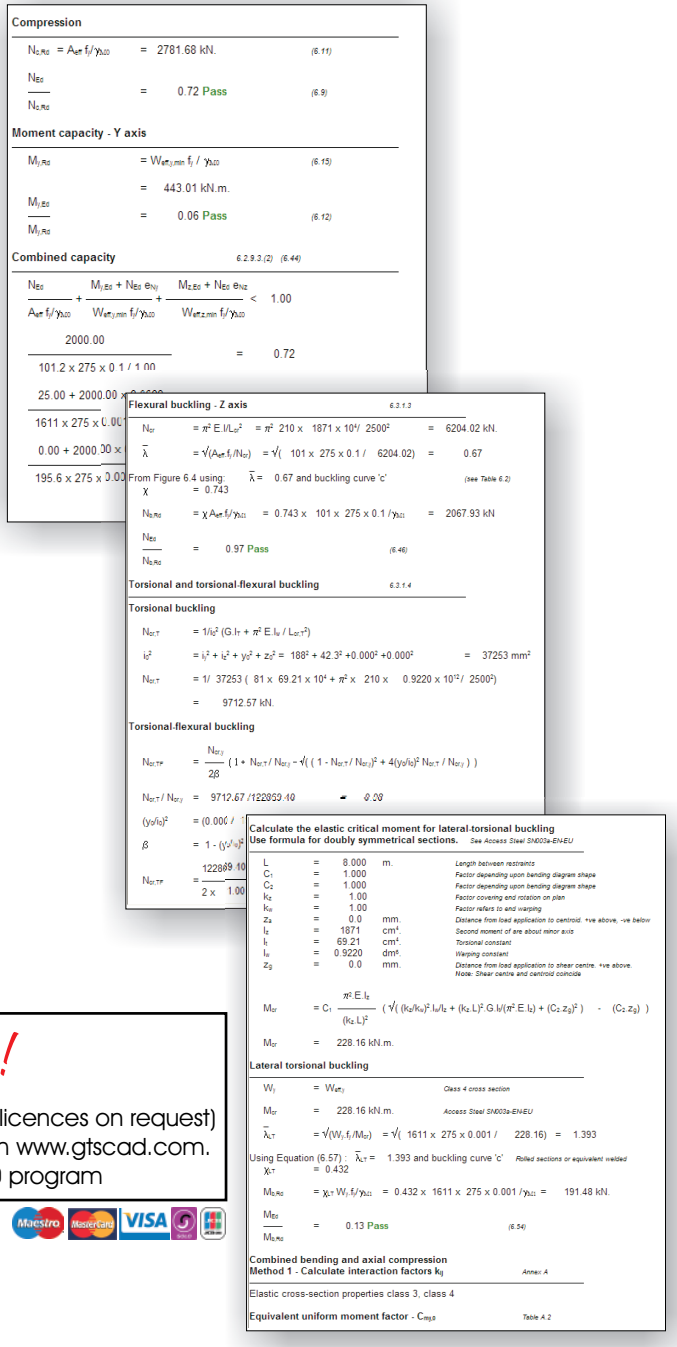
Section classifications for axial, y bending, z bending: *(for non-symmetrical sections, classification is carried out for either top, bottom, left or right of section in compression depending upon section orientation).*

Calculation of effective section properties for class4 (slender) sections including any shift in neutral axis.

Section capacity checks: axial tension, axial compression, moment, low shear, high shear, moment and shear, moment with axial, moment axial and shear for both Y and Z axis bending. *Class1, 2, 3 and 4 (slender) sections are covered.*

Combined axial, X moment and Y moment capacity checks.

Example Calculation Output



Kickstart your EC3 transition now!

quikEC3 is only £65 per copy +vat (5x for £295, 10x for £550. Site licences on request)
To order, call our Sales Hotline on 01509 260559 or download from www.gtscad.com.
If you're not ready for EC3 yet, why not look at MERLIN, our BS5950 program

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