

BeamAnal001112-.XLT

An Excel Template from Techno Consultants Ltd for Analysis and Database for 500 Beams of 1, 2, 3 or 4 Spans

Introduction

BeamAnal001112-.XLT is a spreadsheet template for calculating Shear, Bending Moment and Deflection along member lengths acting as beams and subjected to vertical loads and moments. Information for up to 500 beams can be stored, retrieved, amended and used for manual or auto analysis as and when required.

Loading the Template on to your computer

BeamAnal is supplied as an Excel 97 Template, having .XLT as its filename extension.

To load **BeamAnal** on to your computer, copy this file into Microsoft Office folder for its Templates. Generally the path to this folder in Excel 97 is:

C:\Program Files\Microsoft Office\Templates

If you are using Excel 2000, the path to this folder is:

C:\Windows\Application Data\Microsoft\Templates

To load and use the Template in Excel 97 or Excel 2000, choose:
File, New and then select the file BeamAnal001112-

If you receive an Excel Warning about running Macros and are prompted for whether to load them, answer YES to Load and Enable Macros. **BeamAnal** incorporates VB Macros and to allow your computer to use them is vital for its operation.

Features

- The file size is 526 KB. At 3 KB/second, the download time would be about 3 minutes.
- Plots of Shear Force, Bending Moment & Deflection are shown in 3 separate diagrams. Moving the mouse pointer over these diagrams displays the exact magnitudes of Shear, Bending Moment and Deflection at any desired point on the span.
- A beam length can have up to 3 middle supports at a Mouse Click. This makes it a Single, Two, Three or Four Span continuous beam for analysis. Position of each support can be set to any required value within the member length.
- Nine types of loads are permitted on the span. They are: Point Load; Full Span UDL per-unit length; Full Span UDL Total; Patch UDL per unit length; Patch UDL Total; Left Triangular Patch Total; Right Triangular Patch Total; Moment; Twin Point Load.
- Each applied load can have its individual Load Factor. A mouse click allows the analysis results to become factored or un-factored.
- Any unit of Force, Length, Inertia, Modulus and Deflection can be selected for analysis.
- Decimal Places for Analysis Locations, Shear Force, Bending Moment and Deflection values can be set to any desired accuracy.

- Data Store facility keeps information for up to 500 beams in a worksheet STORE. By using a reference number in the range 1001 to 1500, each beam details can be retrieved, changed and used for analysis with ease at a later date.
- Worksheet STORE includes two columns for Auto Analysis selection. One column allows selection for analysis and the other selection for printing. All or selected beams can therefore be analysed and or their results printed by a mouse click based on the selection so made.
- The worksheet STORE also keeps maximum and minimum values of deflection, shear and moment for each beam analysis. After Auto Analysis, this information can be used for design purposes.
- The worksheet STORE is a visible Database of up to 500 beams. This data can be examined and changed using usual Excel features.
- The template has virtually no user interface. Printed Output matches the Screen display. Knowing the use of Excel 97 and being able to understand the output is sufficient for using **BeamAnal**.
- Shaded cells in the spreadsheet mean "**User Input**" and un-shaded cells "**Spreadsheet Results**". This permits easy checking at a glance both by the user and the checker of **BeamAnal** results.
- Green, Yellow and Red colouring of cells guides the user interactively for correct data input.
- The analysis results are produced at 30 equi-distant points along the member length. If required, all or selected points can be set to any exact position.

BeamAnal001112-.XLT is made available as shareware. For further information, including registration details and disclaimers, refer to "**Terms**" within the spreadsheet.