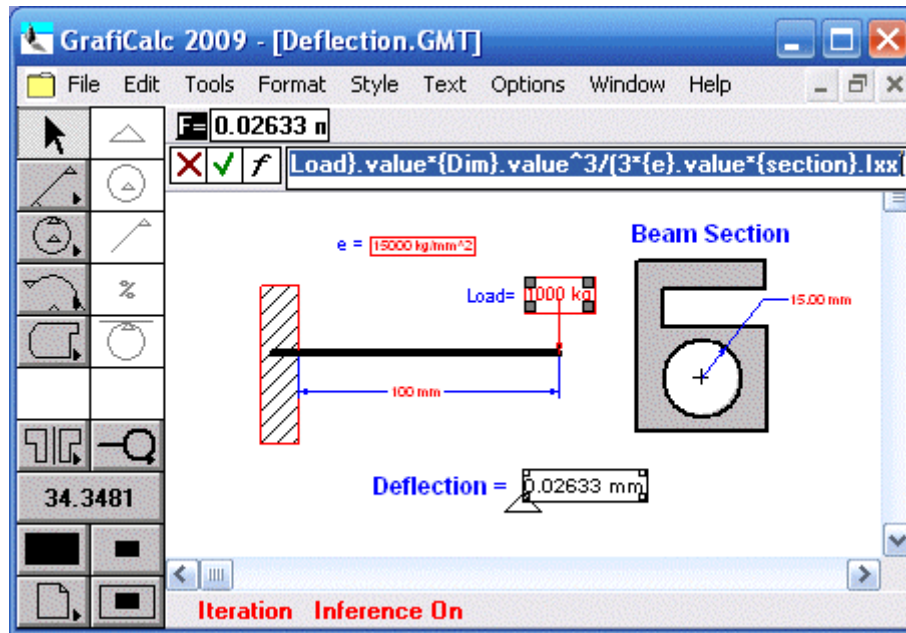


GrafiCalc 2010 FAQ



GrafiCalc 2009 and 2010

Question: How does GrafiCalc work?

With GrafiCalc users capture the functional intents of any mechanical design challenge by associating geometry, dimensions, and "smart" calculations in a single flexible model. Initial geometry can be sketched directly in GrafiCalc or easily imported from any popular CAD application using the 2-way DXF translator built within GrafiCalc. Then users can substitute parameters in the flexible model to ask and receive interactive decision-support information and solutions.

GrafiCalc 2010 sketcher includes automatic constraint inference facility that enables users to snap to center, centroid, endpoints, tangents, centroid, intersection, virtual intersection, and on-geometry automatically. Lines snap automatically to horizontal and vertical.

Eighty-eight built-in calculation functions are included to perform automated geometry associative algebraic, binary, control, geometrical, logical, mathematical, statistical, and trigonometric calculations. Which means, as the geometry changes the associative calculation are updated interactively. Many of the built-in functions are context sensitive and automatically inserted in the GrafiCalc Formula bar saving time.

GrafiCalc also includes the world's first programmable geometrical calculator that allows users to define $x = f(y)$ type of multi-line calculation statements that directly include geometry and dimensions in the active worksheet. Multiple calculation programs can be linked together to create powerful problem solving platforms.

Results from the programmed calculation can directly drive any attribute of any geometry in the worksheet. This one-of-a-kind facility in GrafiCalc enables users to create validated libraries of calculations that can be reused and shared with other members of the design team.

Unit checking is automatic at all times. Users can work in English, Metric, as well as user definable unit systems. Double precision floating point accuracy is maintained at all times.

Best of all, in several situations, GrafiCalc enables the engineer to solve design challenges without performing any calculations. Simply constrain geometry and attach "smart" associative dimensions to obtain instantaneous answers.

Question: How do I backsolve geometry with GrafiCalc?

GrafiCalc incorporates industry-first geometry Goalseek facility that makes it possible to start by specifying measured and calculated values as design goals and have the computer “backsolve” exact geometry to meet the desired design goal using just seven (7) mouse clicks. For example users can specify values for parameters such as weight, cost, stress, deflection, distance, clearance, location of centroid etc. as design targets and then backsolve exact geometry to satisfy the goal automatically.

GrafiCalc Goalseek facility represents the next generation of design automation technology that allows users to automatically solve any design challenge that benefits from optimization against stipulated shape, position, and fit criteria.

Question: How do I leverage Excel with GrafiCalc?

Although GrafiCalc is a self-contained application and can be used standalone, yet you can leverage your existing Excel calculations and VBA applications by establishing bi-directional link between Excel and GrafiCalc using the DDE (Dynamic Data Exchange) facility built within GrafiCalc. This facility enables to feed measured and calculated geometry based information to your Excel calculations and conversely use values in Excel cells to drive any freedom of any geometry in GrafiCalc.

Question: Who should use GrafiCalc?

GrafiCalc can help any engineer who is performing geometry dependent calculations and making geometry dependant design and engineering decisions.

Question: What are GrafiCalc proven applications?

Applicability of GrafiCalc is a function of the user's knowledge of engineering and time spent with the software. To date, GrafiCalc is being used by thousands of mechanical, civil, structural, and industrial engineers for solving a variety of design and engineering challenges. Following is partial list of proven GrafiCalc applications.

- Beam Design
- Bearing Design
- Belt and Conveyor Design
- Boat and Ship Structure Calculations
- Centroid Calculations
- Composites Calculations
- Force diagram analysis
- Forging Calculations
- Heat Transfer Calculations
- Hydraulics Design
- Layout Analysis
- Lighting design
- Load Distribution Calculations
- Magnetic Calculations
- Masonry Bridge Stress Graphical Calculations
- Mechatronic Design
- Optics layout analysis
- Paper machinery Design
- Pressure vessel Design
- Pump Design
- Shaft Design
- Shape Dependent Design
- Strength of Materials Calculations
- Stress, Strain, Deflection Calculations
- Structural Engineering Calculations
- Valve Design
- Volume Calculations
- Welding Calculations

Question: What do I need to run GrafiCalc?

System requirement: Any personal computer running Windows 95, 98, NT, XP, Vista and Windows 7.
The compact program size delivers ultra-fast responses with a minimal system.

Disk requirement: < 2 MB

Question: How long does it take to learn GrafiCalc?

Engineers familiar with CAD and spreadsheets can understand GrafiCalc principle of operations in less than thirty minutes. GrafiCalc ships with tutorials, examples, and video trading modules to make users familiar with all aspects of the software quickly and easily.

Question: What about support and maintenance?

Technical support via the web and maintenance of GrafiCalc is included in the price.

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