

# Bevel Gear Rating Software Suite Now Available

**A**AGMA's Computer Programming Committee has created a new Bevel Gear Rating Suite of software to easily calculate bevel gear ratings according to AGMA standards.

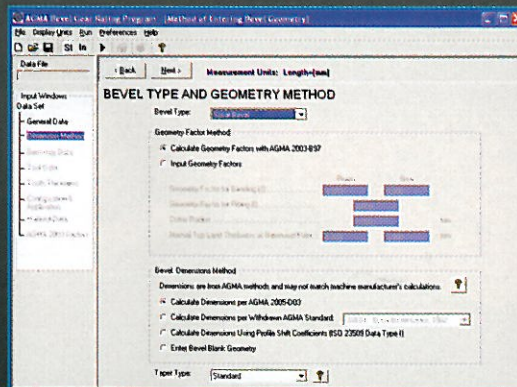
Calculate not only the rating, but easily enter or calculate geometry according to either current or old standards. The program covers material from the following standards:

- AGMA 208.03 – System for Straight Bevel Gears (1978)
- AGMA 209.03 – System for Spiral Bevel Gears (1964)
- AGMA 209.04 – System for Spiral Bevel Gears (1982)
- AGMA 202.03 – System for Zerol Bevel Gears (1965)
- AGMA 390.03a – Gear Handbook Gear Classification, Materials and Measuring Methods for Bevel, Hypoid, Fine Pitch Wormgearing and Racks Only as Unassembled Gears (1988)
- AGMA 929 - Calculation of Bevel Gear Top Land and Guidance on Cutter Edge Radius
- ANSI/AGMA 2003 - Rating the Pitting Resistance and Bending Strength of Generated Straight Bevel, Zerol Bevel and Spiral Bevel Gear Teeth.
- ANSI/AGMA 2005 - Design Manual for Bevel Gears
- ANSI/AGMA 2009 – Bevel Gear Classification, Tolerances, and Measuring Methods
- ISO 23509 – Bevel and Hypoid Gear Geometry

The software allows users to quickly and accurately compare your own designs and practices with these standards, or to understand your competitor's ratings. The Bevel Gear Rating

Suite calculates geometry and ratings for straight, spiral, skew, and zerol bevel gears according to ANSI/AGMA standards. The program strictly follows these standards without imposing design rules; thereby, a full range of gears can be accurately analyzed.

The program allows you to enter bevel gear parameters quickly in the manner and units you prefer. It can calculate the geometry factors for you or accept factors that have been calculated outside the program. Tooth thickness can be



entered, calculated by balancing geometry factors, or calculated from AGMA or ISO thickness factors.

Both output and the data input screens are very user friendly and efficient. Data input methods and many input data can be customized to default to those used by your company.

#### FEATURES INCLUDE:

- AGMA 2003 Standard may be used to calculate rating factors.
- Safety factors may be calculated based on the input power, or for AGMA 2003, the allowable power may be calculated from the factors entered.
- User friendly I/O provides an intuitive user

interface, with drop down boxes, look up tables, and graphical guides used liberally to assist in data entry.

- Dynamic unit conversion allows the user to switch between SI and inch units at any time.
- Flexible data entry concept allows the user to enter data in an accustomed format; for example, the user can enter tooth thickness data as normal or transverse circular thickness, or as chordal measurements.
- Tolerance worksheets allow the user to calculate tooth tolerances from quality number or accuracy grade, convert between them, and to display tolerances for either.
- Hardness conversion routine allows any of 8 different hardness scales to be used for data entry. Conversion between different scales may be done with a click on the new scale. The conversions are for steel and iron only and are approximate.
- Error and warning messages are provided both within the input routine and within the rating routines to help identify problems.
- On-line help is incorporated into the program and serves as the user manual.
- The program output includes input data, error messages and notes, variable symbols, the calculation method for rating factors, and calculated values. The output is displayed and may be printed directly by the program or stored in rich text format (RTF) for use by most word processors.

For more information, or to purchase the software visit [www.agma.org](http://www.agma.org). □