

# Software Bits

*Our New Products Special Edition*



## Software for Determining Addendum Modification

ZARXE, from Hexagon Industriesoftware, is used to calculate the addendum modification coefficient for an existing gear. The user enters values for pressure angle, helix angle, modulus and number of teeth. The addendum modification coefficient can be determined from dimension over balls, dimension over pins or span measurement for spur, helical or ring gears with involute teeth. For more information, visit [www.hexagon.de](http://www.hexagon.de).

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## Diamond Solutions Announces Gear Software Suite

Diamond Solutions, San Diego CA offers a suite of software tools for gear design and manufacture. The titles include *GearTools1*, which checks the usability of available shaper cutters and hobs for manufacturing external or internal spur gears, helical gears or splines; *MyMasterGear*, for master gear design and inventory management; *MySplineGages1*, for designing spline gages (plug and ring) and for managing gage inventory; and *MyExtGearGeol* and *MyIntGearGeol*, which are used for calculating gear geometry parameters, wire size for measurement and machine setup details.

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## AGMA's ISO 6336

### Rating Calculation Software

ISO 6336 is the international rating standard for external spur and helical gears. AGMA, in conjunction with its work in developing the standard itself, has developed and tested software that addresses ISO 6336 "Method B," the most comprehensive, analytical calculation method the standard allows.

The AGMA/ISO 6336 software allows the user to determine gear capacity in accordance with the new standard, compare existing practices and designs with ISO 6336 results, and understand the ratings of competitors who use the standard.

The software comes with a manual that guides the user through the more than 80 input values the calculations require. Visit [www.agma.org](http://www.agma.org) for more information.

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## DesignLink Bridges TK Solver and Pro/E

Gear shops around the world use TK Solver software and the related gear design modules from Universal Technical Systems. A new package from UTS provides a link between TK Solver and Parametric Technology Corporation's Pro/Engineer solid modeling program.

Numeric information is transferred from TK Solver to Pro/E: number of teeth, face width, outside diameter, helix angle, pitch, pressure angle and tooth profile coordinates. A single button click on the Pro/E side generates the solid model.

DesignLink also makes it feasible to transfer parametric data from a 3D model to TK solver for further engineering analysis or other calculations. After the analysis is complete the data can be transferred back to Pro/E and a new model generated.

Design rules like Roark's formulas for stress and strain or in-house design rules

and procedures can be implemented in the solid modeling environment through DesignLink, says UTS spokesman Todd Piefer. For more information, visit [www.uts.com](http://www.uts.com).

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## FeatureWorks Recognizes Parametric Features

Solidworks Corp. has released FeatureWorks, a software application that recognizes parametric features from files produced by standard 3D translators for use in the company's SolidWorks solid modeling software.

FeatureWorks captures data and recognizes features imported from STEP, IGES, SAT, Parasolid and VDAFS files so that engineers can share 3D models with organizations that use different CAD systems.

FeatureWorks software is best suited for quadrangular, conical and cylindrical machined and sheet metal parts containing features such as extrusions, cuts, bosses, fillets and chamfers. For more information, visit [www.solidworks.com](http://www.solidworks.com).

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## New CAD-Based Gear Measuring Software

International Metrology Systems demonstrated a new gear module, VirtualDMIS, at IMTS 98. The application of CAD-based measurement to

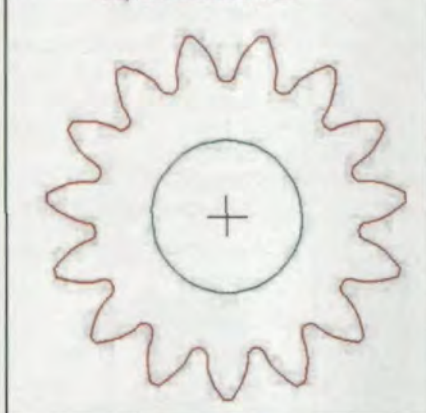
gears greatly simplifies gear measurement and reduces checking cycle times by more than 50% compared to conventional gear measuring software, company representatives say.

VirtualDMIS enables coordinate measuring machines to measure all geometric parameters for spur and helical gears, including lead, profile, pitch, runout and tooth thickness. The software extends the versatility of the CMM for gear manufacturers, possibly avoiding the need for specialized gear checking equipment.

The software uses the ANSI Dimensional Measurement Interface Standard DMIS 3.0, to enable CAD to CMM communication regardless of CMM brand.

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FIGURE 2: This gear plot is the same as that in Figure 1 except for the removal of the X-Y axes.



#### New Release from Trogetec

EZgearplot v3.9-w is a menu-driven program for creating high-resolution drawings (300 X 300 dpi and higher), layouts, text, charts, diagrams, etc. The program is recommended for creating drawings of gears, roller chain sprockets, timing belt pulleys, harmonic gearing profiles, etc. The program is designed for Windows 95 and generates WMF files, which can be easily converted to AutoCAD format. For more information, visit [www.trogetec.com](http://www.trogetec.com).

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#### Dr. DWG CADLite Library 5.0

CADLite Library 5.0 from Dr. DWG reads and writes AutoCAD R13 and R14 drawings saved in DWG, DXF and binary DXF formats, giving users the ability

to extract and modify blocks, attributes or text data and to import and export AutoCAD drawings.

Developers say the CADLite Library 5.0 is the fastest AutoCAD library utility on the market. It operates on Windows 95, 98 or NT platforms. A fully functional 30-day trial version is available for download from [www.drdwg.com/download.htm](http://www.drdwg.com/download.htm).

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