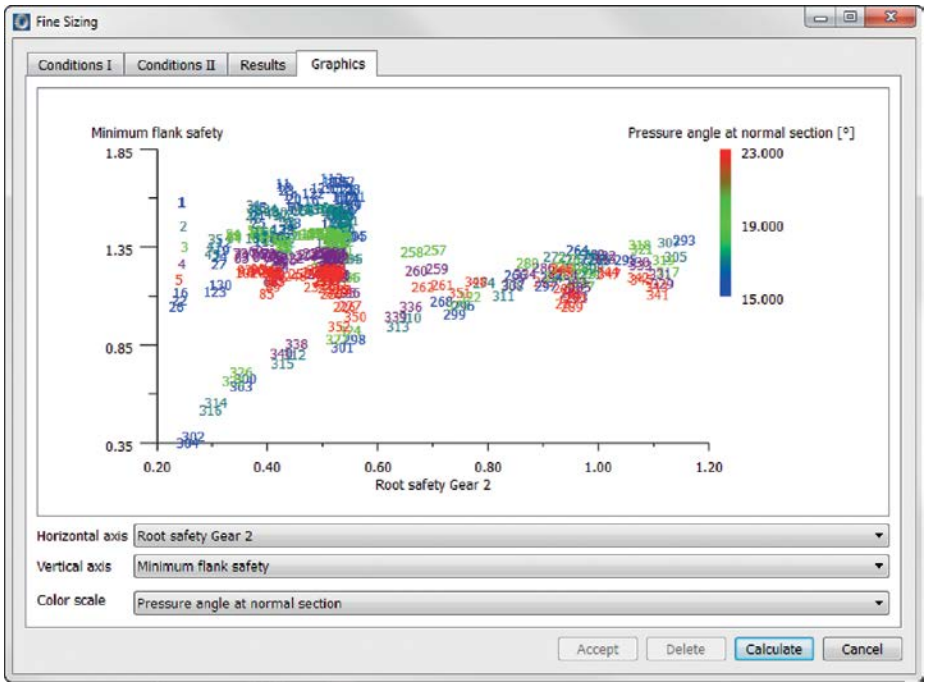
KISSsoft

OFFERS LATEST SOFTWARE UPGRADES

KISSsoft covers a broad range of applications in a single software package. The latest release of *KISSsoft (Version 03/2013)* incorporates the newest advances in contact analysis for both cylindrical gearing and planetary geared systems as well as fine sizing for worm wheels and crossed helical gears.



Fine Sizing for Worm Wheels and Crossed Helical Gears

For the calculation of worm wheels and crossed helical gears, fine sizing modules are now available (module ZD5 and ZE6). The *KISSsoft* fine sizing is applied to gear optimizations of all kinds — from static strength to noise optimization. Thereby, the macro geometry is varied in desired areas and the optimal solution according to various criteria is selected from the calculated variants. Plastic helical gears can be directly calculated according to the new draft of VDI 2736. After the cylindrical and bevel gears, these fine sizing modules complete the sizing process for all teeth.

Configurable Manufacturing Drawings for Cylindrical Gears

For all cylindrical gears, custom configurable manufacturing drawings are now available in *KISSsoft* (module ZPK). The gear data and a range of different graphics–such as flank modifications, etc.–can now be displayed in one graphic, output to screen or paper, and sent to the gear manufacturer. At the same time, graphic position and scale can be set by the user on his own. Now gear data can be easily arranged and placed on the graphic. The settings are saved in a separate file and thereby adopted for all gears. This approach favors also the definition of company standards. Those interested can look at the manufacturing drawing examples in a *KISSsoft* test license by e-mailing *info@KISSsoftAG.com*.

Evaluation of Gear Modifications in the Radar Chart

Another highlight in the *KISSsoft Release 03/2013* is the extended settings and evaluation options for optimizing modifications of cylindrical and planet gears. A new feature is that the face load factor $K\mathrm{H}\beta$ can now also be calculated. This therefore reveals the direct influence of the tooth trace modification on the safeties of the classic tooth root and flank load capacities.

Modifications are evaluated in the radar chart, which also provides a very clear comparison, especially within different partial loads.

Contact Analysis for Planetary Units

The contact analysis has been greatly extended for planetary gear units (module ZA30). It is now possible to take into account the exact deflections of the shafts on the sun, the planet, and the internal gear. The planet carrier position is also determined by a shaft calculation, or can alternatively be specified as a displacement. The results are finally displayed in the 3-D system, ensuring maximum clarity. This provides a powerful analysis tool for the planet system. New dimensioning suggestions are now calculated for modifications, especially for planetary gear units (module ZA5). This ensures that tooth trace modifications can be specified accurately, on the basis of the planet carrier torsion and sun gear deformation.

For more information:
KISSsoft AG
Phone: +(41) 55 254 20 50
www.kisssoft.ag

MHI
TOUTS GEAR SHAPING TECHNOLOGY

Mitsubishi Heavy Industries, Ltd. (MHI) has completed the development of a new gear shaping machine, the ST40A, capable of cutting a broad array of gears, including helical and cluster gears, with one system. The ST40A's significantly expanded range of cutting applications derives from the first application in Japan of NC programming technology to the relieving motion that prevents interference between the cutter and the workpiece. The machine made its international debut in the United States with a live demonstration of its capabilities at Gear Expo 2013, in Indianapolis. The ST40A is a totally upgraded version of the ST40, a helical gear shaping machine requiring no helical guide for each workpiece. The ST40A has extended the ST40's cutting flexibility even further by incorporating Japan's first NC-programmable relieving mechanism and making all seven of the machine's axes fully NC-programmable. This new capability enables the ST40A to accommodate various high-precision cutting applications such as crowning and tapering. In addition, stroke speed has been increased by 20 percent, from the earlier 500 strokes per minute to 600, enabling high-speed cutting with a focus on productivity. Stroke speed when machining at lower speeds meanwhile has been reduced by 50 percent, from 60 strokes per minute to 30, enabling secure cutting of hard workpieces. The new machine is also capable of tapering up to 0.3 degrees without use of a tilt table. In these ways, the ST40A has been designed to fully address diverse user needs, including demand for a broader range of optional devices and functions, and enhanced operability, safety and energy savings. The company intends to market the ST40A for a wide spectrum of gear cutting applications for various products including automobiles, construction machinery and aircraft.

For more information:
Mitsubishi Heavy Industries America
Phone: (248) 669-6136
www.mitsubishigearcenter.com

Sandvik Coromant

EXPANDS GEAR MILLING FAMILY

The CoroMill 172 range was recently extended on October 1st. This disc cutting concept adapted for gears, splines and racks will now be available in module 3-10 (DP 8.467-2.540) with gear profiles in accordance with DIN 867 for gears and DIN 5480 for splines. CoroMill 172 disc cutters offer a versatile and time saving solution for milling of high-quality gear profiles. Thanks to the new indexable carbide insert technology and powerful iLock interface, the component can be machined in flexible, non-dedicated machines, such as multi-task machines and machining centers, as well as in hobbing machines. CoroMill 172 is designed to be able to hold a range of inserts, offering flexibility for customers producing gears and splines of close module size and similar tooth profiles. CoroMill 172 is an attractive alternative for milling of high-precision profiles in a wide range of applications. Diameters range from 2.480-10.000 in. (63 to 254 mm).

For more information:
Sandvik Coromant
Phone: (800) SANDVIK
www.sandvik.coromant.com

Saint-Gobain

INTRODUCES NORTON FINIUM FILM ROLLS

Saint-Gobain Abrasives, Inc. has introduced Norton Finium abrasive microfinishing film rolls for precision applications. Norton Finium products are designed with a new, patented topside resin system alongside two new backing types and an innovative grit size color coding. This combination is specifically engineered to deliver high material removal and exceptional surface finish uniformity, while positioning Norton Finium film products as the most advanced in the market. The new Norton Finium line, designated Q351R and Q351S, features either a Rough (R) back or Smooth (S) back film, to meet any application requirement and equipment type. These microfinishing film rolls are used in powertrain polishing operations in the automotive, truck, marine, small engine, and very large engine manufacturing operations around the world. Film rolls are made in extremely fine grit sizes, available in 80 – 9 micron/µ or 180 – 1,000 grit of straight and scalloped edge. The micron size is so fine that it can be difficult to distinguish visibly one from the other, which is critical in selection process. "We have added a color code by grit size as visible identity verification to simplify selection to avoid mistakes inside our customers manufacturing plants," says Alexandre Pecora, product manager for film for Saint-Gobain.

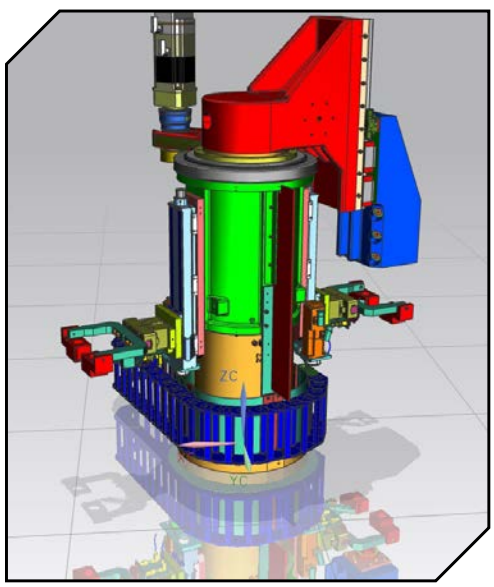
For more information:
Norton (Saint-Gobain)
Phone: (508) 795-2833
www.nortonabrasives.com

Siemens
ENHANCES PLM SOFTWARE

Siemens recently introduced a new series of industry-specific offerings at its annual PLM Software Analyst Conference in Boston. The *Industry Catalyst Series* offerings consist of a pre-packaged combination of industry best practice guides, templates and software aimed at accelerating PLM deployment and tailoring the system to the needs of specific industries. The series is designed to increase a company's overall return on its PLM investment, as well as the speed at which ROI is realized. The new offerings will also make it faster and easier to adopt, and gain value from, the latest PLM technology. The *Industry Catalyst Series* will work with one or more Siemens PLM Software offerings and – in accordance with the company's open business model – in combination with third party PLM solutions. Individual Industry Catalyst Series offerings will be announced over the next several months.

"Two years ago we began our transition from a product-focused organization to one focused on the unique requirements of industries," said Chuck Grindstaff, president and CEO, Siemens PLM Software. "This announcement represents a pivotal step forward in that transition. Each offering in the *Industry Catalyst Series* will be built around a specific industry's best practices, based on in-depth knowledge we have collected over more than 30 years of working with customers. By embedding that knowledge and experience in each offering, our customers will not only experience accelerated PLM implementations, but those implementations will be tailored to each company's business in a way that facilitates the adoption of new technology. The result is more business value, faster ROI, and the ability to benefit from the latest technology as soon as it becomes available."

Over the past several years, most organizations have come to appreciate how PLM technology and processes can help them increase productivity and efficiency. At the same time, however, many of these organizations have been slow to implement a full-scope PLM solution, or



to adopt the latest technology for their existing PLM system. This often stems from concern about costs and business disruptions associated with the need to customize standard PLM technology to their specific processes, data structures and workflow.

The *Industry Catalyst Series* minimizes that disruption by delivering an industry-tailored deployment more quickly. As the name implies, each individual *Industry Catalyst Series* offering will work like an industry-specific "agent" to accelerate a PLM implementation.

"Building interfaces and custom coding can add significantly to the cost of a PLM system," said Georg Vogl, executive program manager PLM at BSH, a Siemens PLM Software customer. "Over the past several years, Siemens has evolved its PLM software solutions to minimize these efforts by allowing us to configure the system to our needs rather than developing custom software. This has already helped us reduce our total cost of PLM ownership by 25 to 35 percent. Now with the introduction of the *Industry Catalyst Series*, we see the potential to implement new PLM technology even faster and reduce costs even further."

For more information:
Siemens PLM Software
Phone: (800) 498-5351
www.plm.automation.siemens.com

Northfield Precision

INTRODUCES MODEL 1025 AIR CHUCK

Northfield Precision Instrument Corporation, a designer and manufacturer of precision workholding chucks, introduces their Model 1025 air chuck. This chuck is used to grip on the pitch diameter of a large ring gear. A pin cage with integral axial locator is mounted to the chuck face as a subassembly. When accomplished, the jaws push the pins inward to grip the gear's pitch diameter. Northfield Precision designs and manufactures accurate air chucks for any lathe, boring machine, grinder or VMC. Models include through-hole, high-speed and quick-change. Chucks are available in SAE or metric, in sizes from 3" (76 mm) to 18" (457 mm). Accuracies of 0.001" to 0.00001" (0.254 m) are guaranteed. Custom workholding chucks and jaws are available, and free engineering assistance is offered.

For more information:
Northfield Precision
Phone: (800) 810-2482
www.northfield.com

Blaser Swisslube

RELEASES BLASOCUT BC935SW

Blaser Swisslube Inc., a manufacturer of Swiss quality metalworking fluids, is pleased to announce the release of Blasocut BC935SW. Blasocut BC935SW is formulated with the latest in state-of-the-art metalworking fluid components. Blasocut emulsions provide excellent bio-chemical stability and long sump life. This is due to the unique bio-concept of Blasocut emulsions and is accomplished without the use of bactericides, while maintaining a high level of environmental health and safety. Blasocut BC935SW is chlorine free yet provides high cutting performance and long tool life in cast iron, steel, aluminum and exotic alloys and is formulated for use in machining applications over a wide range of materials. Blasocut BC935SW has excellent washing action and low misting properties, thus providing a high level of machine and shop cleanliness. Blasocut BC935SW exhibits suitable bio and chemical stability and is formulated for use in water with a maximum hardness of 140 ppm. Blasocut BC935SW provides foam control in moderate to high coolant pressure applications.

For more information:
Blaser Swisslube
Phone: (845) 294-3200
mailboxusa@blaser.com
www.blaser.com

Hardinge

OFFERS C-SERIES COLLET AND COLLET STOPS

Hardinge Inc., a manufacturer of spindle tooling, began production of collets in the 1890s for use on bench lathes making parts for the watchmaking and lens industries. It is believed that the "C" designation for their first 5C collets came from the name of the Cataract waterfalls that could be viewed from the factory grounds of the Hardinge Brothers Company in Chicago, Illinois where they manufactured precision Cataract bench lathes.

Incredibly, the Hardinge C-series design has not changed since the early use in the 1890s, even in light of the rapidly changing technology in machine tool design. A collet has the capability to accurately grip a workpiece or a tool, resisting both rotational forces and multi-directional cutting loads with the ability to rapidly release the workpiece or the tool. A collet has the capability to amplify the actuation force, converting it into workpiece gripping or tool gripping with the ability to operate at high repetition levels without loss of accuracy or material failure. It also has the ability to operate at a wide range of rotational speeds with minimal loss of gripping force.

Hardinge C-Series collets, in sizes ranging from 1C up to 25C, are used in manual and CNC lathes, mills, grinding machines, collet blocks and closers, indexers, rotary tables and tool holders. The Hardinge collet is manufactured to exacting standards from special alloy steel. Threads are heat treated and the body is spring tempered to assure accuracy and durability. Hardinge C-series collets are available in fractional sizes of round, hexagon and square to capacity. In addition, many round collets are stocked in metric, decimal, letter and number sizes. Most of the popular sizes of round serrated, taper hole and regular collets are available from stock. Special accuracy 5C collets with a guaranteed maximum TIR of .0002" are available. Collet variations include emergency collets, step collets, extended-nose collets, step chucks (stepped out collets that hold larger diameters), and Dead-Length collet systems for controlling workpiece lengths.

The standard Hardinge 5C-series collet, with an order hole of .9843" or less includes precision internal threads to permit the use of Hardinge positive solid and ejector stops. The Hardinge stops are threaded into and positively locked against the end of the collet and are adjustable and machineable for the desired part length to accommodate a wide variety of chucking work. Once locked in place, the stop cannot move even under heavy drilling or other end-working pressures. Universal stops are available for 5C collets and 16C spindles. A variety of Hardinge Dead-Length systems are also available for producing consistent work pieces, including through-hole style for bar work.

For more information:
Hardinge Inc.
Phone: (607) 734-2281
www.hardinge.com

Dillon Manufacturing

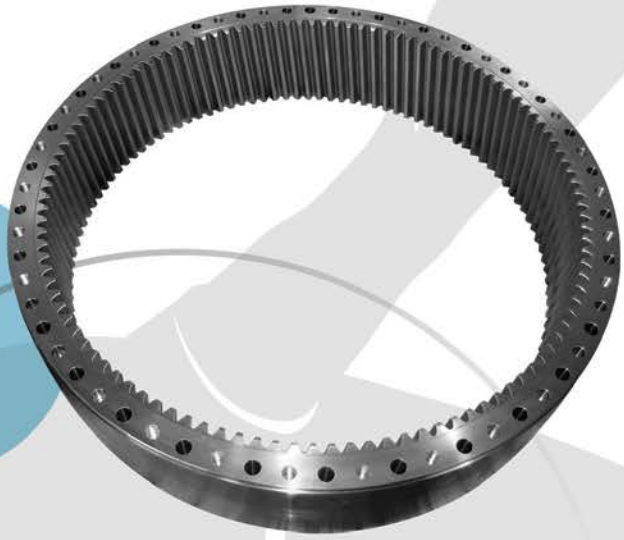
INTRODUCES HPG500 LUBRICANT

Dillon Chucks and Jaws introduces HPG500 – a boundary lubricant that prevents metal-to-metal contact under high load and slow speed conditions for either high-end manual chucks or power chucks. This premium, high-performance NLDI Grade 2, lubricating grease has suitable mechanical stability, very high load carrying capacity, and water and moisture resistance. It has a water washout rating of less than three percent. Plus, its unique formulation gives it rust and corrosion resistance, even in the presence of a synthetic and oil based coolant environment. This chuck lubricating grease handles high loads, and provides long term corrosion protection under the most hostile conditions.

OCG

OVERTONCHICAGOGEAR

PROCESS-DRIVEN PRECISION



IT'S WHAT'S INSIDE THAT COUNTS

As wind turbines get larger, gear reliability becomes even more crucial. Overton Chicago Gear is one of the few companies in the U.S. with the machining and heat treat capabilities to meet the close tolerances and high standards of this growing industry. Today, we supply gearing for most of the top manufacturers of turbine gearboxes. Because we know it's what's on the inside that counts.

125 years of precision gears
for the most demanding gear applications.

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The environmentally friendly formulation contains no heavy metals or other environmentally undesirable materials such as compounds containing antimony, barium, lead, chlorine, phenols, or phosphorus. This lithium-free formula does not react negatively when contacting the water contained in water based coolants – as opposed to lubricants with lithium which cause lithium build-up on the internal workings of the chuck.

An all-purpose industrial lubricant, HPG500 can be used in bearings, bushings, slides, pivots, tracks, etc., — all important engineering components of manual and power chucks. It is recommended wherever high lubricity, EP (Extreme Pressure) properties, mechanical stability, rust and corrosion protection, water washout protection, and good oxidation stability are required.

Essential for the safe operation, and maintaining maximum gripping pressure of chucks, HPG500 is available in 14 oz. tubes. It can be purchased by the tube, in cases of 10 or 50 each. A greasing set, consisting of a grease gun, 2 tubes of grease and one grease adaptor fitting, is also available. HPG500 is also safe to use in your machine centers that require EPI grease.

For more information:
Dillon Manufacturing, Inc.
Phone: (800) 428-1133
www.dillonmfg.com

Oelheld
INTRODUCES NEW FLUID LINES

Oelheld U.S. introduces IonoGrind, a multifunction fluid that is equally suitable for spark erosion and as a grinding oil. It has been designed for the use in combination machines (two-in-one systems). IonoGrind combines the advantages of a high-performance dielectric allowing for high rates of metal removal with suitable surface quality and that of a high-speed grinding oil which displays low foaming and misting properties. Additionally, Oelheld U.S. has introduced DiaCut CP, a new line of punching oils which have been developed especially for fast punching machines. They effectively prevent the formation of built-ups and allow for punching without burrs. DiaCut CP punching oils are rolled or sprayed onto the workpiece. Finished parts are practically free of residue. DiaCut CP punching oils contain no chlorines and heavy metals and are practically free of aromatic compounds.

For more information:
Oelheld U.S.
Phone: (847) 531-8501
www.oelheld.com