

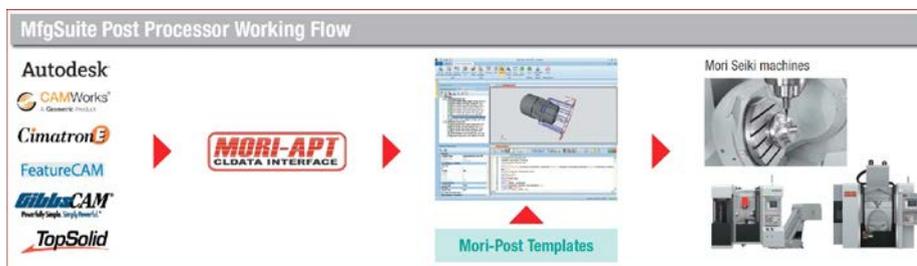
# DMG/Mori Seiki

## RELEASES MANUFACTURING SUITE POST PROCESSOR

DMG/Mori Seiki recently announced the release of a Mori-APT toolpath-based post processor, available September 2013. The new post processor is a part of its simple, integrated and powerful suite of applications called *Manufacturing Suite*. This universal post processor will be available for all Mori Seiki machines and will work with any CAM software that outputs toolpaths in Mori-APT standardized format. The *Manufacturing Suite Post Processor* software comes with proven post templates to output NC code for all Mori Seiki machines.

The post processor can be a bottleneck for customers—who may struggle to successfully leverage their machine-tool investment. DMG/Mori Seiki invested time and money to proactively enhance user experience by working with all major CAM vendors and to develop a template-based post processor for MAPPs. The result, *Mori-Post*, was released in 2007. *Mori-Post* features a generic input interface (and the Mori-APT formatted toolpath); CAM vendors can now use the generic Mori-APT input interface in their software.

The Mori-APT toolpath format is an extension of APT CLDATA standard (based on ANSI NCITS 37-1999 and ISO 4343:2000). The *Manufacturing Suite Post Processor* can import the standardized toolpath from any CAM software and generate NC code using the proven DMG/ Mori Seiki post templates.



For the process to work, customers need to acquire the Mori-APT CLDATA interface-enabled version of the CAM software from their respective CAM vendors and acquire the *Manufacturing Suite Post Processor* software from DMG/ Mori Seiki.

Traditionally, customers are required to purchase machine tools and CAM/ post processing software from different vendors, leading to discrepancies in quality, thoroughness and timely delivery. Furthermore, without quality post processors, the CAM-generated program may not run successfully on the machine tool. Now, DMG/Mori Seiki delivers the machine tool and the corresponding *Manufacturing Suite Post Processor* software, allowing customers to hit the ground running as soon as a machine lands on their shop floor. Customers can continue to use multiple CAM software solutions in conjunction with *Manufacturing Suite Post Processor* to generate NC code, now avoiding the needs to procure post processors for individual CAM software and with the added benefit of a single support con-

tact. The Post Processor that is a part of *Manufacturing Suite* also includes additional software application modules such as, "NC Simulation" for virtual machine NC code and collision detection verification, and "Program Manager" for sending and receiving NC programs and parameters between PC and machine tools.

CAM software vendors Autodesk, Cimatron, FeatureCAM, Geometric, GibbsCAM, PartMaker and TopSolid have expressed an interest in working with DMG/Mori Seiki to develop interfaces to output Mori-APT CLDATA. As of the date of this press release, the following CAM products offer Mori-APT CLDATA interfaces:

Mill: CAMWorks, CimatronE, FeatureCAM, GibbsCAM, HSMWorks, Mastercam, ParkMaker, TopSolid

Turn: CAMWorks, FeatureCAM, GibbsCAM

### For more information:

DMG/Mori Seiki  
Phone: (847) 593-5400  
[www.dmgmoriseikiusa.com](http://www.dmgmoriseikiusa.com)



## Riten

### OFFERS GEAR CUTTING LIVE CENTER

American gear manufacturers have traditionally used an imported center for hobbing, cutting and grinding. Many of these companies have expressed their preference for a source of American-made centers with comparable quality, lower cost, quicker delivery, and faster turnaround on repairs. Riten Industries now offers its "Raptor" series, specially-engineered

live centers that are available for immediate delivery through its extensive distribution network. Concentricity is well within standard industry tolerances, and purchase costs are well below that of the imported product. Repairs are made in the United States, with turnaround times as little as two weeks. Accuracy of Raptor centers is guaranteed to  $\pm .00005$ . They

# Wenzel

## ANNOUNCES CMM IMPROVEMENTS

Wenzel America, Ltd. is proud to announce a new series of improvements in their line of CMMs. The manual X-Cite CMM System has been overhauled with new hardware and a sleek new look that is guaranteed to impress those who are seeking a reliable CMM. The improved system, which is used for a wide variety of applications including manual part inspections of production parts and tooling and fixtures, now includes extremely high accuracy which measures by the micron, and is manufactured entirely from granite.



are designed with a small shell diameter to provide extra tool clearance. Models are in stock with standard and extended tracer points, in 3 and 4 Morse Taper. A 2 Morse Taper will be available in late 2013.

**For more information:**  
Riten Industries, Inc.  
Phone: (800) 338-0027  
[www.riten.com](http://www.riten.com)

The newly repackaged CMM includes Manual *OpenDMIS* software with full CAD import and export with no hidden software costs. It has axis locks and fine feeds, and comes with installation and training for two people at the Wenzel training center. Prices start at \$28,600 for the X-Cite 5.6.5 CMM (20" x 24" x 20") and models are available up to 7.12.5 (27.5" x 47" x 20"). All models are in

stock in Michigan and the entire system is backed with a lifetime guarantee.

All X-Cite CMMs are assembled by skilled and experienced craftsmen and manufactured from metrological material to very precise tolerances.

**For more information:**  
Wenzel America, Ltd.  
Phone: (248) 295-4300  
[www.wenzelamerica.com](http://www.wenzelamerica.com)

**MAXline**  
**GOLD-RUSH**

**Hobbing with Ingersoll!**

A Leader in ICI Gear  
Machining Tools and Your  
Most Experienced Source  
for Indexable Hobbing Cutters!

Segmented designs with  
angled screwholes for  
easy indexing

**GEAREXPO 2013**  
EXHIBITOR  
Booth #235

Member IMC Group  
**Ingersoll**  
Cutting Tools

845 South Lyford Rd · Rockford, IL 61108-2749 · 866/690-1859 · Fax: 815/387-6968 · [www.ingersoll-imc.com](http://www.ingersoll-imc.com)

# Mitutoyo

## DESIGNS COMPACT MEASURING SYSTEM

Mitutoyo America Corporation announces availability of the innovative, new Ko-ga-me measurement head — designed to bring full capability to applications where a compact, high-performance, 3-D CNC, 2- or 3-axis measurement system would be suitable. The Mitutoyo Ko-ga-me is small-sized, requiring only a minimal envelope

(17.3" [440 mm] × 16.1" [410 mm] × 4.7" [120 mm]) and weighing 17.6 lbs. (8 kg). This makes Ko-ga-me agile and easy for a customer to mount — using either an available fixed base (wherein the workpiece moves during measurement) or using a moving-axis mounting system of the customer's own design.



Mitutoyo Ko-ga-me measuring systems are available for horizontal or vertical installation and can be used in stand-alone applications or integrated into work cells. Ko-ga-me is suitable for inspection of large or small workpieces and offers a wide range of available measurement probes including touch-trigger, optical or constant contact probing.

The Mitutoyo Ko-ga-me is available in 40 mm, 80 mm, and 120 mm stroke models and offers a resolution of 0.02 μm, a measuring accuracy from 1.5 × (3L/1000) μm, a maximum drive speed of 200 mm/s (1 axis) and has a maximum acceleration of 0.4 G (1 axis). In addition the unit supports probes including: TP200+PH6, SP25+PH6M and QVP (QuickVision Probe).

**For more information:**  
Mitutoyo America Corporation  
Phone: (888) 648-8869  
[www.mitutoyo.com](http://www.mitutoyo.com)



## Synergy in Metal Cutting Technologies



Since 1929 Colonial Tool has delivered high quality machine tools and cutting tool systems to serve a diversity of customers. With a commitment to excellence in our global operations, Colonial has the right solution for your metal cutting applications.



- Broaching Machines
- Broach Tools
- Specialty Machines
- Spline Rolling
- Spindles & Slides
- Milling Cutters
- Boring Tools
- Actuated Tooling
- Custom Tooling Systems



Facilities In  
U.S.A. • Canada • Mexico  
1-866-611-5119  
[info@colonialtool.com](mailto:info@colonialtool.com)  
[www.colonialtool.com](http://www.colonialtool.com)

# Norton Abrasives

## LAUNCHES NORTON VITRIUM3

Norton Abrasives, a brand of Saint-Gobain, has developed and launched Norton Vitrium3, the next generation of bonded abrasives products, engineered for maximum performance and cost savings in precision grinding. An entirely new abrasives platform, Norton Vitrium3 features a patent-pending bond technology developed by the Saint-Gobain Abrasives R&D team. This bond features an exclusive chemistry that promotes excellent grain adhesion, resulting in improved product versatility across a wide range of applications. Substantial performance improvements with Norton Vitrium3 are now attainable in all Norton abrasive grains, from proprietary Norton Quantum ceramic alumina to conventional aluminum oxide.

Norton Vitrium3 has three major features and benefits over standard vitrified bonds:

1. A stronger bond construction allows superior form and corner holding for improved part quality and higher tolerances, reduced dressing time and wear, as well as the ability to meet the higher wheel speeds demanded of today's equipment.
2. An improved holding power utilizing less bond-to-abrasive ratio. This allows increased exposure of the abrasive grains for an improved cut rate and significantly less burn, while reducing power consumption and grinding forces on the part.
3. An increased porosity improves coolant flow and chip clearance to eliminate burn or other part damage, especially on today's tough-to-grind materials, such as high nickel alloys, tool steels and chrome.



“Whether the goal is to reduce total cost per part, increase throughput, or improve workpiece quality, Norton Vitrium3 is re-shaping the world of precision grinding to meet these needs,” said Scott Leonard, director of product management at Norton Abrasives. “This new technology will allow significant increases in production and also intro-

duces the possibility of grinding instead of conventional machining on some operations.”

### For more information:

Norton (Saint-Gobain)  
Phone: (508) 795-2833  
[www.nortonabrasives.com](http://www.nortonabrasives.com)

**MAXline**  
**GOLD-RUSH**

**Gashing with Ingersoll!**

**A Leader in ICI Gear Machining Tools and Your Most Experienced Source for Indexable Gear Gashers!**

**Custom indexable roughing and finishing cutters for your specific tooth profile**

**GEAREXPO 2013**  
EXHIBITOR  
Booth #235

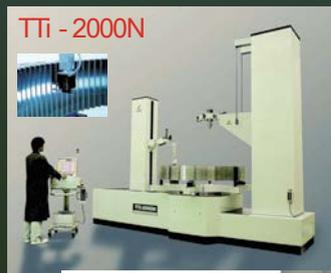
Member IMC Group  
**Ingersoll**  
Cutting Tools

845 South Lyford Rd · Rockford, IL 61108-2749 · 866/690-1859 · Fax: 815/387-6968 · [www.ingersoll-imc.com](http://www.ingersoll-imc.com)

# A Better Way

## The "NDG" Method

### New Power for your Gear Measuring & Inspection Systems



- With our State-of-the-art NGD method it is possible to measure any external and internal Gear from as small as Module 0.2 to larger sizes, even over 30000 mm OD.
- User Friendly



**USA Office**  
 Tokyo Technical Instruments USA Inc.  
 297 Kinderkamack Rd., #133  
 Oradell, NJ 07649  
 Ph: 201-634-1700  
 Fax: 201-262-2187

**Japan Headquarters**  
 Tokyo Technical Instruments Inc.  
 Main Office Ph: +81-3-3726-4188  
 Factory Ph: +81-284-73-1733

**See Details**  
[www.tti-geartec.jp](http://www.tti-geartec.jp)

# Hexagon

## RELEASES OPTIV CLASSIC 443TP

Hexagon Metrology recently announced the release of the Optiv Classic 443 tp, the newest model in the Optiv Classic series. Each unit comes touch probe-ready and includes a high-resolution CCD (charge-coupled device) camera for multi-sensor applications with micro- to nano-scale precision measurement requirements. The Classic 443 tp boasts a first term accuracy of 1.9 microns, making it suitable for the inspection of small-scale features and parts like micro-hole dies, sieves, filters, fiber optics and inkjet nozzles as well as complex, densely populated precision parts from the medical, aerospace, electronics or automotive industries. This entry level, high-capacity multi-sensor CMM (coordinate measuring machine) provides over five times the measurement volume of its smaller brother, the Optiv Classic 321GL tp. Attendees of HxGN Live, Hexagon Metrology's annual international user group meeting, previewed the new product and the Optiv Classic product line June 3 - 6 in Las Vegas, NV.

Highlights of the Classic 443 tp's innovative vision technology include calibrated lighting, a high resolution color CCD camera, and a multi-segment LED triple angle ring light to create better contrast for edge detection. The multi-sensor CMM features a 12x CNC motorized zoom for continuous adjustment of field of view and resolution, and an LED status indicator providing a quick visual check of the machine's status.

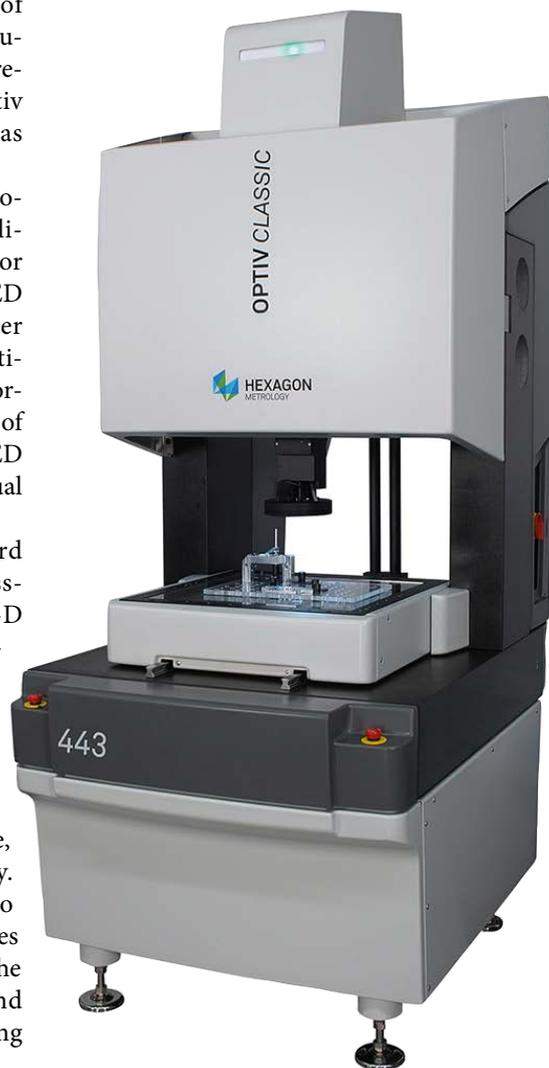
The Classic 443 tp comes standard with *PC-DMIS Vision* image processing software and optional online 3-D CAD capabilities for live programming of the machine to compare measured values to nominals. The software includes the groundbreaking MultiCapture feature which finds all 2-D characteristics in the field of view, regardless of their type, and measures them simultaneously. MultiCapture then moves the camera to the next cluster of features and measures them. This sequence continues until the inspection program is complete, and is automatically optimized by creating

the most efficient path with the fewest number of stage movements. Inspection speeds increase by 50 percent or more, depending on feature size and density, which can significantly raise throughput.

"The Classic 443 tp offers increased capacity, without sacrificing accuracy, in a truly innovative multi-sensor CMM," states Dan Farnsworth, product manager for Hexagon Metrology. "The increased measurement volume makes it ideal for palletized parts and offers good accessibility to the measuring table from all sides. It is the perfect fit for high-volume measurement of small, tightly toleranced parts."

### For more information:

Hexagon Metrology  
 Phone: (800) 274-9433  
[info@hexagonmetrology.us](mailto:info@hexagonmetrology.us)  
[www.hexagonmetrology.us](http://www.hexagonmetrology.us)



# Lexair

## DELIVERS WORKHOLDING SOLUTIONS

OML's MC Modular Workholding System uses fixed and movable vise jaws and patented self-locking CLAK parallels to achieve multiple clamping solutions and increased part accuracy with less set up time. Unique features on the MC vise include snap-in, self-locking middle-jaw CLAK parallels that are held in place when the vise is opened in the vertical position, making it ideal for use on tombstones. The CLAK system allows for quick-change of parallels, angular parallels, soft jaws and "V" jaws, making part changeovers and size changes quick and easy. A unique tapered-jaw design pulls the workpiece down against the parallels as the vise is closed, eliminating the need to hammer the part down.

The MC vise is designed for quick changeovers with a moveable clamping jaw that can be lifted from the base, shuttled to the next position and lowered into place for a different size workpiece. Held in place with a toggle locking mechanism, the moveable jaw unlocks from the base with a flip of the wrist. By relocating the clamp jaw close to the workpiece, the length of the clamp screw can be kept short, minimizing jaw distortion under high force.

The clamp screw can also be replaced with a hydraulic cylinder for automated operation. The MC vise accommodates jaws with rolls, GRIP jaws, aluminum jaws, middle jaws, jaws with grippers UGE, Plus 3-D jaws and floating side-ways for raw workpieces. Various jaw adapters, including one for Kurt jaws, allow the use of legacy vise accessories. Adding to their versatility, the vises are easily transported between machine tools. The 6 in. x 8 in. (150 mm x 200 mm) base with a simple clamping system weighs only 55 lbs. (25 kg).

The base length determines the vise's clamping capacity and the jaws can be used with any base configuration, providing a flexible workholding solution with minimum investment. Bases are 6 in. wide (150 mm) and available in 8 in. (200 mm), 10 in. (250 mm), and 12 in. (300 mm) lengths. An 8 in. (200 mm) x 12 in. (300 mm) base is also available, as well as two extended length MC-XL models, with lengths of 21.5 in. (545 mm) and 26 in. (655 mm).

All components are constructed from oversize steel profiles and are case hardened and precision ground to ensure exceptional flatness and durability. Wear parts are specially treated for a surface hardness of 50/60 HRC, and all non-ground surfaces are burished to protect against corrosion.

### For more information:

Lexair Inc.  
Phone: (859) 255-5001  
[www.lexairinc.com](http://www.lexairinc.com)



## MAXline GOLD-RUSH

### Shaping with Ingersoll!

A Leader in ICI Gear  
Machining Tools and Your  
Most Experienced Source  
for Indexable Gear Shapers!

Roughing at 3-4 times faster  
than conventional methods

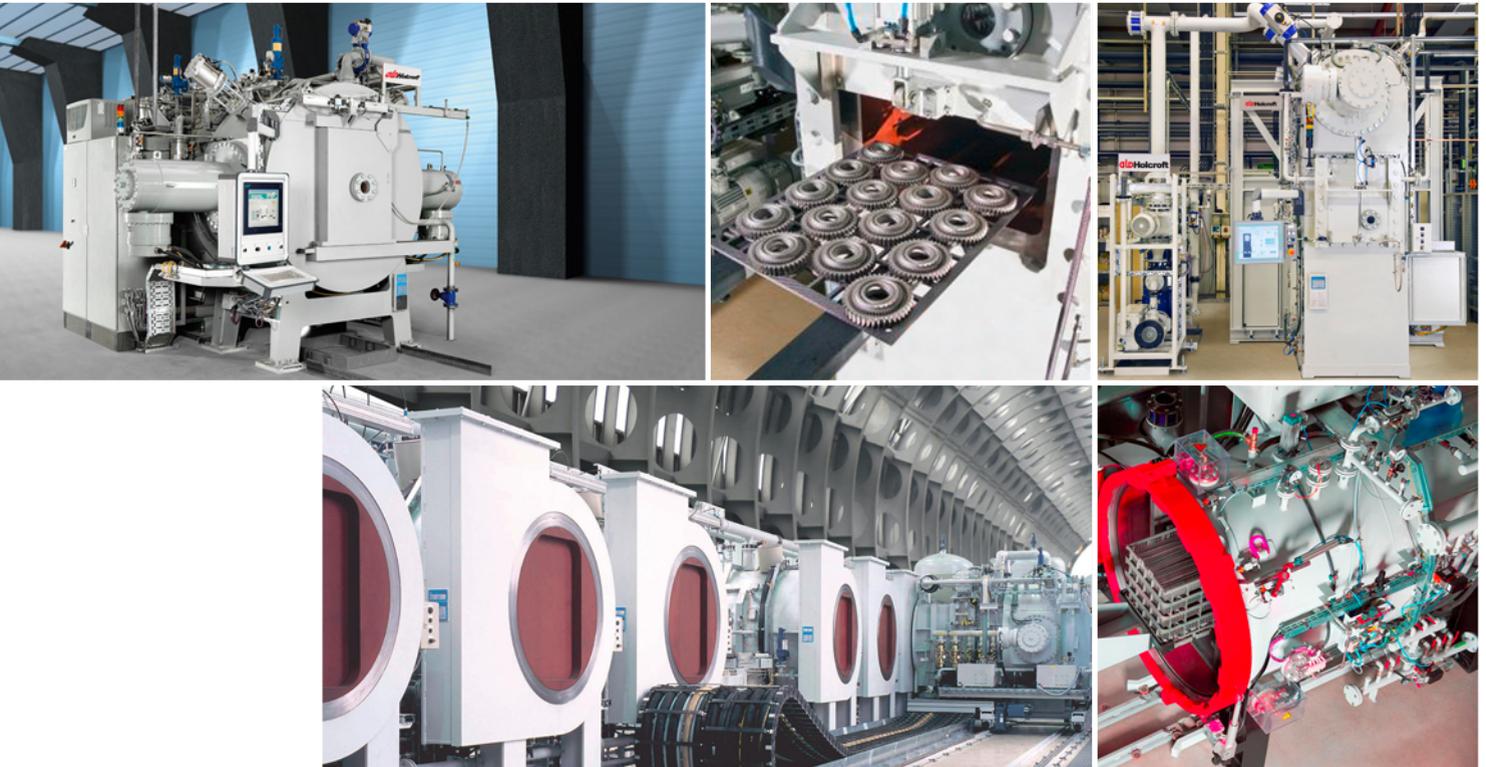


Member IMC Group  
**Ingersoll**  
Cutting Tools

845 South Lyford Rd. Rockford, IL 61108-2749 · 866/690-1859 · Fax: 815/387-6968 · [www.ingersoll-imc.com](http://www.ingersoll-imc.com)

## Vacuum Furnace Innovations

Providing Profitability Through Technology



Innovative vacuum furnace technologies available for every production requirement.

**ModulTherm®**.....high volume production designed for incremental growth.

**SyncroTherm®**...high profits by synchronizing with machining centers.

**DualTherm®**..... high performance via separate heating and quenching chambers.

**MonoTherm®**.....high flexibility with a variety of processes and configurations.

**ALD-Holcroft Vacuum Technologies**

49630 Pontiac Trail

Wixom, MI 48393-2009 USA

Ph: 248.668.4130

Fx: 248.624.3710

E-mail: sales@ald-holcroft.com

[www.ALD-Holcroft.com](http://www.ALD-Holcroft.com)

# Polygon Solutions

## IMPROVES PROCESS FOR MEDICAL IMPLANT BROACHING

Innovation in orthopedic medical implants continues to improve. As a result, manufacturing processes required to make those parts are adapting. Polygon Solutions Inc. manufactures rotary broach cutting tools for the precision machining industry, and is expanding their product line to include innovative tools used for machining orthopedic implants.

The most well-known orthopedic implant is likely the bone screw. Bone screws have typically been made from materials that can resist various forms of bio-corrosion. Stainless steel and titanium have been popular metal materials. Although research continues into more organic materials and coatings, titanium is very popular, and this presents certain challenges to machining.

Machining the outside contour of the titanium screw and the threads is a turning operation, and has been addressed quite well by the tooling industry and innovative thread whirling tools. However, adding the hole for a screw driver is still challenging, and early broaching technology is constantly revisited. Once the domain of rotary broaching tools, pecking and shaping type operations are becoming more popular.

The latest advancement is to use a standard rotary broach without the rotary broaching tool holder. The broach is locked into position using a tool holder or collet, and pecked or punched into the part's pilot hole in small increments. If the chip accumulation begins to interfere with broaching, the broach can be removed, the chips drilled out, and then the broach can be brought back into the hole and broaching can resume.

The hexagon form is still the most popular. The hexagon removes a smaller amount of material in the corners of the pilot hole than a square or hexalobular form. However, sometimes due to depth of hole, or need to broach full form without an oversize pilot hole, or large hex sizes, broaching is unsuccessful due to excessive pressure.

In this case the punch broach can form a rectangle 1/3 the hexagon form. After broaching the first rectangle, the part (or possibly the broach) can be rotated sixty degrees and broached again. After repeating one more time, a hexagon has been created without the force required to punch full form.

### For more information:

Polygon Solutions Inc.  
Phone: (239) 628-4800  
[www.polygonolutions.com](http://www.polygonolutions.com)



# MAXline

# GOLD-RUSH

## Gear Cutting with Ingersoll!

**A Leader in ICI Gear Machining Tools and Your Most Experienced Source for Low-Volume Gear Generation!**

**Standard indexable products & Superior Process Consultation**



Member IMC Group

# Ingersoll

Cutting Tools

845 South Lyford Rd · Rockford, IL 61108-2749 · 866/690-1859 · Fax: 815/387-6968 · [www.ingersoll-imc.com](http://www.ingersoll-imc.com)