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2023



OFFICIAL SHOW GUIDE



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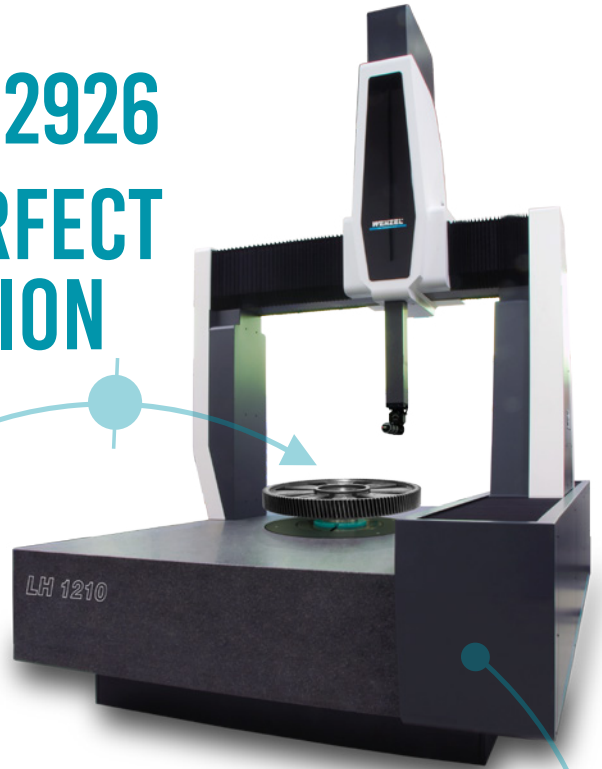
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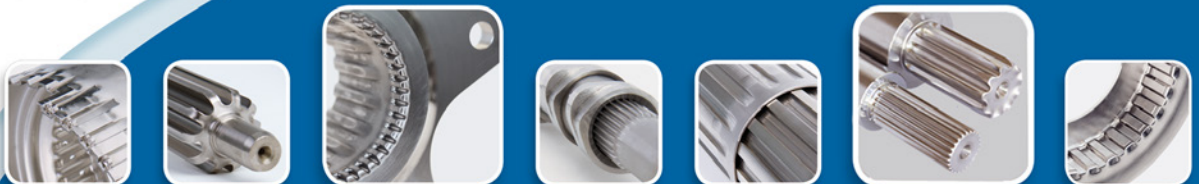
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GENERAL INFORMATION

OFFICIAL REGISTRATION AND SHOW HOURS

DATE	REGISTRATION HOURS	SHOW HOURS
Monday, Oct. 16	7:00am - 4:00 pm	
Tuesday, Oct. 17	7:00am - 6:00 pm	9:00am - 6:00 pm
Wednesday, Oct. 18	7:00am - 5:00 pm	9:00am - 5:00 pm
Thursday, Oct. 19	7:00am - 4:00 pm	9:00am - 4:00 pm

ENTRY INTO MOTION + POWER TECHNOLOGY EXPO 2023

All registrants must wear a computerized badge to gain entry into the Exhibition Hall. Badges may be picked up in the Registration Area located in the lobby outside the exhibition. Admission to MPT Expo is open to industry-related adults only. No one under the age of 18 will be admitted to the Exhibition Hall. Your badge also gains you entry into the ASM Heat Treating Society's Exhibition.

INTERNET SERVICE

Free Wi-Fi is available in the common areas of the Convention Center and the Expo floor.

FOOD SERVICE

During show hours, salads, sandwiches, desserts, beverages and more will be available for purchase in the Concessions areas located throughout the Exhibition Hall. There are also a variety of restaurants within walking distance of the convention center which can be accessed from the main entrance on Washington Blvd. Show floor concessions will be open from 11:00 a.m. until 4:00 p.m. on 10/17-10/19

Visit **Booth #1801** at the Heat Treat Show co-located with MPT

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UNAUTHORIZED SOLICITATION

Solicitation of business on the premises of the Exhibition Hall by anyone other than representatives of official exhibiting companies is strictly prohibited. Please report any unauthorized solicitation immediately to Show Management.

PARKING AND GETTING AROUND DETROIT

Huntington Place has parking available for a fee paid by credit card only on a first-come, first-serve basis at the Roof Deck parking, Washington Blvd. Garage, and the Huntington Place Congress Street Garage.



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Quality drives success.



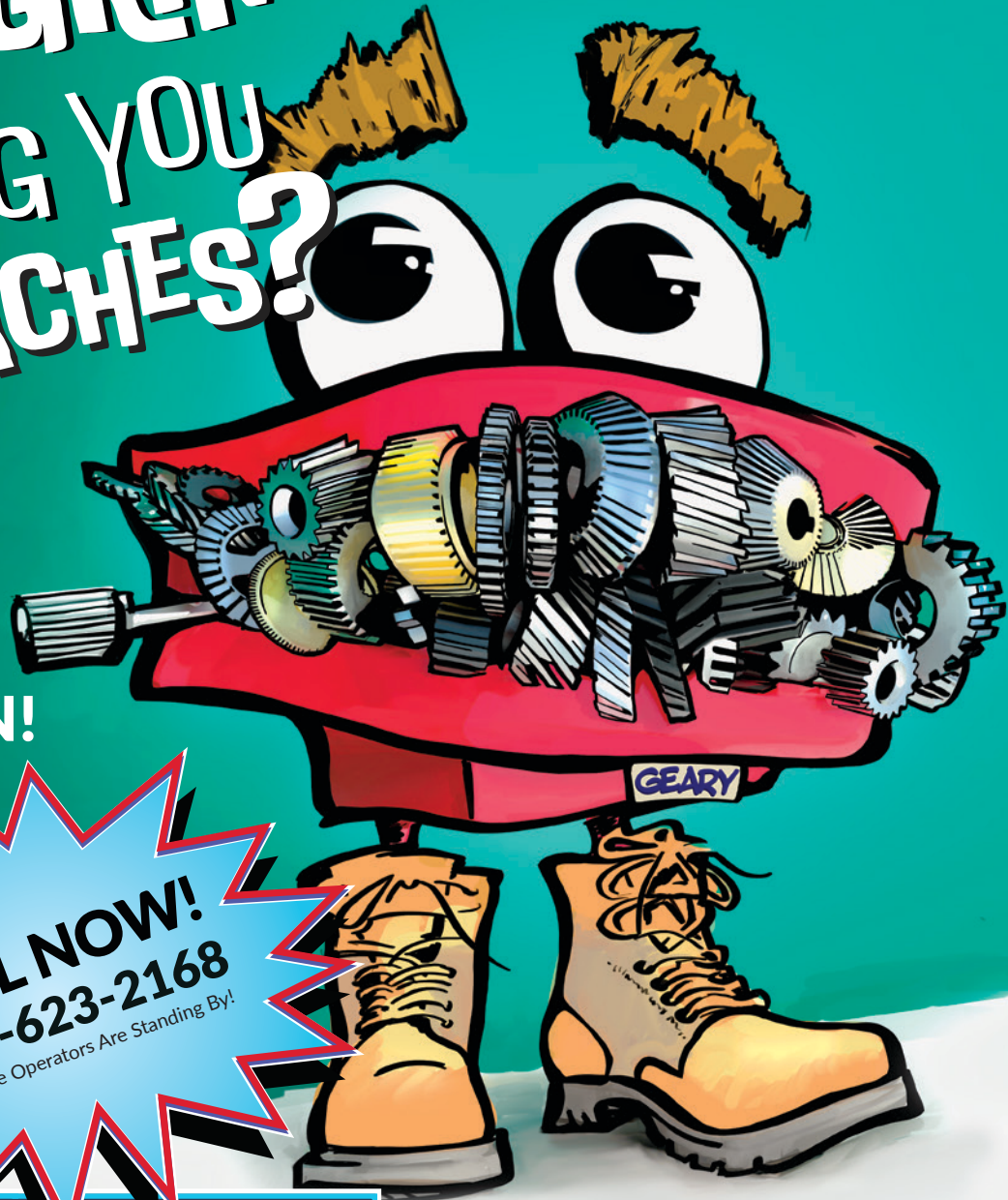
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HAINBUCH AMERICA

BOOTH #3013

UNRIVALED INNOVATION

In the realm of gear machining, the critical importance of workholding cannot be overstated. The success of any gear manufacturing process hinges on securing the workpiece with unwavering stability, allowing for intricate machining operations that result in gears of exceptional quality. HAINBUCH's commitment to pushing the boundaries of innovation in gear workholding has not only revolutionized the industry but has also set new standards for precision, repeatability, and efficiency.

MAXXOS... A NEW ERA IN MANDREL DESIGN

Traditional mandrel designs have often struggled to maintain the required rigidity and precision necessary for demanding gear cutting tasks. The MAXXOS mandrel shatters these limitations by introducing a revolutionary hexagonal taper mechanism. This unique design not only bolsters the mandrel's strength but also redefines the way power is transmitted during gear cutting.

HEXAGONAL TAPER: STRENGTH REDEFINED

At the core of the MAXXOS mandrel's exceptional performance is its hexagonal taper. This innovative



Beautiful teeth make a smile...Hainbuch's MAXXOS hexagonal tapered mandrel shown here in a custom engineered solution for gear manufacturing.

feature maximizes the transmission of forces between the mandrel and the cutting tool. The hexagonal shape provides more contact points compared to traditional round tapers, resulting in a significantly stronger connection. This increased contact area leads to greater torque transmission, enabling manufacturers to tackle even the toughest gear cutting applications with confidence.

MINIMIZED TOOL WEAR: THE HEXAGONAL ADVANTAGE

One of the challenges in gear cutting is the wear and tear inflicted on cutting tools due to the forces at play. The hexagonal taper of the MAXXOS mandrel is a game-changer in this regard. By distributing cutting forces more evenly across the tool, the hexagonal taper reduces localized stress points that often lead to premature tool wear. This translates to longer tool life and reduced downtime for tool changes, contributing to improved efficiency and cost savings.

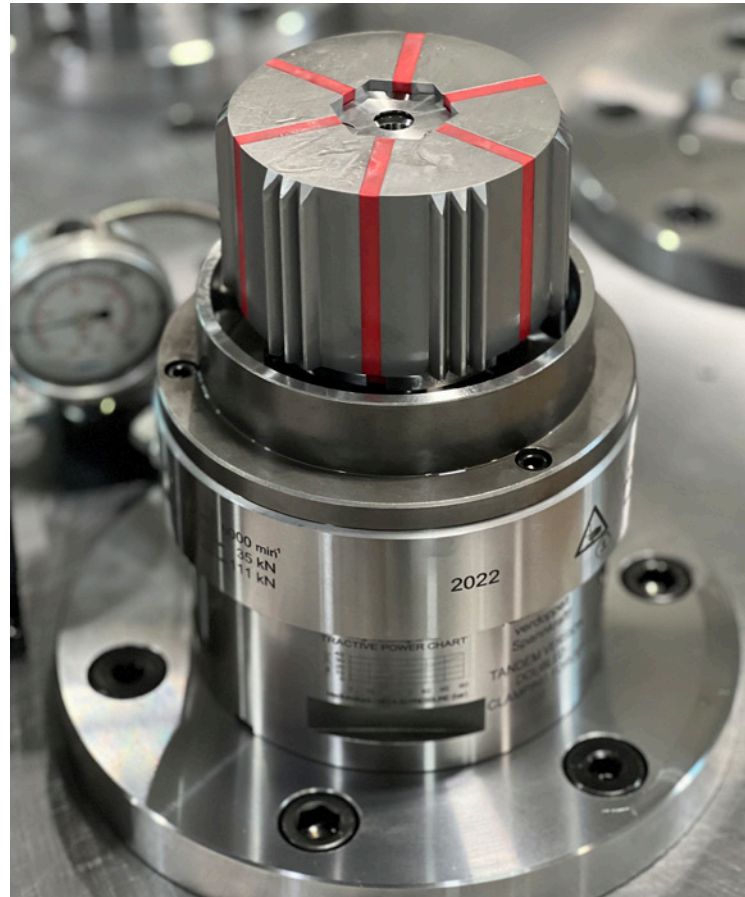
UP TO 57% HIGHER RIGIDITY

Rigidity is a critical factor in precision machining, particularly in gear cutting where dimensional accuracy is paramount. The MAXXOS mandrel's hexagonal taper configuration offers up to

57% higher rigidity compared to traditional mandrel designs. This elevated rigidity ensures that the workpiece remains stable during cutting, minimizing vibrations and enhancing the overall quality of the gear profile. The result is gears that meet the tightest tolerances and exceed industry standards.

PRECISION AND REPEATABILITY

The MAXXOS mandrel's hexagonal taper not only elevates rigidity but also enhances precision and repeatability, **including critical rotational orientation repeat**. The secure connection between the mandrel and cutting tool ensures consistent positioning and alignment, translating into gear profiles that match the intended specifications. Manufacturers can confidently rely on the MAXXOS mandrel to de-



liver exceptional precision, reducing the need for post-machining adjustments.

PROVEN LEADER

The MAXXOS mandrel by HAINBUCH has raised the bar for strength, precision, and efficiency. The innovative hexagonal taper design is a testament to HAINBUCH's commitment to pushing the boundaries of what is possible in machining technology. With maximized transmission forces, minimized tool wear, and significantly higher rigidity, the MAXXOS mandrel is a game-changing tool for manufacturers seeking to achieve exceptional gear cutting results. As industries continue to demand ever more intricate and precise gears, the MAXXOS mandrel stands ready to lead the way into a new era of gear cutting excellence.

For more information, visit:
hainbuchamerica.com

SEE OUR AD ON INSIDE BACK COVER

KAPP TECHNOLOGIES

BOOTH #3200



Gear Centre KNG 350 expert.



Measurement of a rotor with integrated automation on the analytical measuring machine KNM 4X.

GRINDING, INSPECTION, TOOLING AND MORE

At MOTION+POWER Technology Expo in Detroit, KAPP NILES will showcase a virtual model of the Gear Centre KNG 350 expert, several complementing grinding and dressing tools as well as newly developed analytical measuring machine KNM 4X.

The KNG 350 expert is based on a compact, set-up-optimized machine concept and is intended for use in medium and large-scale series production of external geared components with a diameter of up to 350 mm. The integrated loading device ensures the shortest non-productive periods and can accom-

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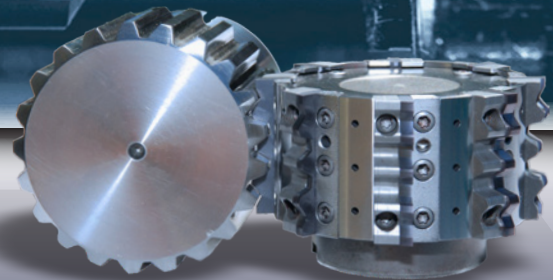


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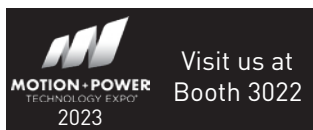
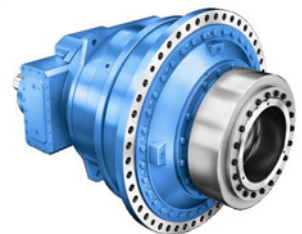
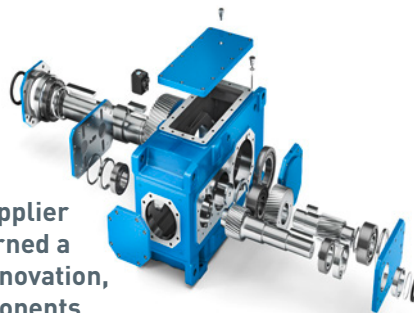


Flender Corporation is a leading global supplier for mechanical drive systems and have earned a reputation for the highest performance, innovation, quality, and reliability of mechanical components.

Flender offers a broad variety of gear units, couplings and associated services with a focus on key industries such as wind power, cement, mining, iron/steel, power generation and conveyor technology.

Flender products and services combine the latest technology with extremely high quality and have been reliably providing the optimal transmission of power for more than 100 years.

Our vision consists in working together closely with all our stakeholders, in jointly shaping a sustainable future and in achieving optimum value for our customers. In short, we are the Partner of Choice for a Sustainable Future.



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WINERGY

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Numerous KAPP NILES grinding and dressing tools.

modate both bored parts and shafts. The new functional and ergonomic machine design paired with the innovative and user-friendly interface KN grind supports the user during set-up and optimization of grinding projects. High-performance technology options combined with application-specific aligning and measuring functions enable maximum precision and surface qualities on the workpiece.

The analytical measuring machine KNM 4X is designed for high-precision measurements of gears, gear tools and rotationally symmetric workpieces up to \varnothing 450 mm.

All guides and base plates made of granite are extremely stable in the long-term and have identically low expansion coefficients. Air bearings with emergency operation properties ensure perfect and wear-free guides without short-term errors. Air spring elements underneath the base plates safely shield from jolts and vibrations. Separate bases are not required. Non-ferrous linear and torque motors of the rotary tables ensure ultimate position precisions and path accuracy. Despite the compact

design, spacious travel ranges ensure a tangential generating motion towards the base circle for any profile. Based on the requirements, different scanning touch probe systems can be used. The control cabinet can be arranged freely.

KAPP manufactures non-dressable, electroplated CBN and diamond grinding tools for hard and soft finishing of gears and profiles. In addition, there are dressing tools for dressing of ceramic tools in the product line. Our tools have been rated among the top products worldwide for decades. They are used whenever the highest quality standards, performance and efficiency are required.

KAPP NILES is a globally operating group of companies with high-quality and economical solutions for finishing gears and profiles and is a partner for companies from numerous industrial sectors in the mobility, automation and energy segments. The perfect interaction between machine, tool, technology and metrology enables extremely precise machining to a thousandth millimeter.

For more information, visit kapp-niles.com



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REISHAUER

BOOTH #2622



Walter Graf and Dr. Christian Dietz, Reishauer AG

Continuous generating gear grinding has established itself as the preferred method of hard-finishing automotive gears. Today, the gear grinding machines have reached an elevated level of maturity. However, recent process and component monitoring developments have added a new dimension to the machines' performance. As machine components are subject to wear, the critical question is when wear may affect gear quality and cause NVH issues. This article focuses on automatic machine component monitoring (ACD) and how this is used by applying artificial intelligence (AI) to predict and avoid wear impacts. Component monitoring refers to all machine axes and bearings used for the grinding of gears.

Reishauer has developed a process and component monitoring system – ARGUS – based on artificial intelligence (AI). Several prerequisites must be met for AI to be effectively used in the first place. First, a large amount of curated data is needed to derive physical regularities to design algorithms. Secondly, in this context, there is also a need for experts and professionals from the gearing industry who can program AI algorithms. In a nutshell, AI has to be hard-won!

“Intelligence” in AI is based on lengthy processes of sending reviewed and curated data sets through neural networks. Through deep learning, the AI system continuously learns and improves the algorithms. AI can find the proverbial needle in a haystack at lightning speed. AI is based on pattern recognition in enormous amounts of data that would escape human intelligence.

Automated component monitoring requires a cloud structure for data storage to cope with the large volumes of data continuously generated by countless grinding machines.

Reishauer continuously increases its knowledge base and, to date, has some 24 million grinding cycles and all its data points, with a monthly increase of some 800,000 cycles. It is important to mention that this data is anonymous and not linked to any specific customer. 24 million grinding operations is a huge enough data pool to apply data science and AI for pattern recognition. These data sets give enormous insight into the processes and the overall impact on machine components.

All the general insights gained by analyzing the data can steadily be fed into ARGUS updates. In this manner, all subscribed customers gain a deeper knowledge of their generating gear grinding processes.

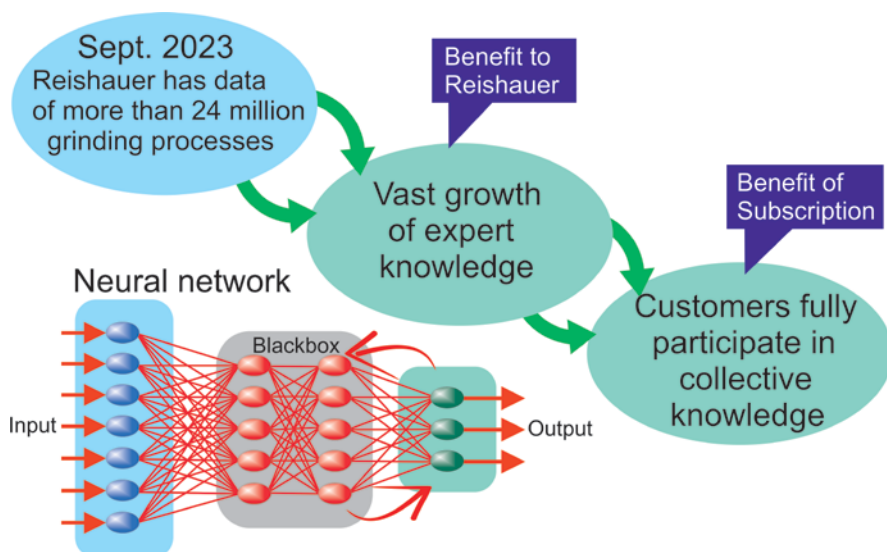


Figure 1: AI and big data analysis

The grinding machine runs autonomous cyclic tests that reflect the machine components' conditions. The resulting signal quantity is only useful if it can be interpreted. To this end, in the past, it was necessary to bring in a highly skilled person because it is paramount to interpret the data before any critical process condition can occur. However skilled, such a person cannot interpret the multiple problems in the volumes of data generated. Furthermore, a skilled engineer visited the customer to evaluate the situation. Now, ARGUS allows the data analysis from Reishauer's home base.

Due to the large amount of data, the ACD finds even the smallest errors or deviations. For example, the detected errors can then be traced back to a bearing of a machine axis. If errors are detected, a service engineer can arrive prepared with the necessary spare parts and an action plan. This level of preparedness is only possible through the capabilities of ARGUS and results in minimal downtime and reduced service costs. Furthermore, ARGUS unequivocally shows whether the service succeeded after replacing the parts.

The machine can be checked as often as required without needing personnel, without interrupting the production cycle, enabling preventive maintenance and saving user costs. Machine downtimes are minimal, and service interventions can be planned. With the help of ARGUS, the Reishauer experts can perform a failure analysis at lightning speed. For example, the specialists can predict a potential NVH problem (disturbing transmission noise) from the signals, preventing faulty parts from being installed in the finished transmission.

Component monitoring is only one aspect of ARGUS. The other important dimension is process monitoring to move ever closer to the desire for zero-defect production. All parts that come off the grinder are individually evaluated and automatically removed if found outside specifications. Process and component monitoring can avoid NVH issues, improve productivity, eliminate rejects, and reduce costs.

For more information, visit reishauer.com

SEE OUR AD ON P. 13

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BOOTH #2610



DR. KAISER ON GEAR DRESSING – YOU CANNOT GRIND UNTIL YOU DRESS

INTRODUCTION

The world of gears is in constant motion. Gear production has been evolving from traditional gear finishing techniques to ground gears with highly accurate forms and finishes. Today, only about 25% of all gears are ground, with the main challenges being increased productivity and quality. The automotive industry is driving the need for high production rates of the best quality gears.

Some parts of the world are seeing a drive for alternatives to internal combustion engine-powered automobiles. But major production areas like North America continue to see a large current demand for ground gears in traditional internal combustion powertrains. The latest generation of IC and electric vehicles require even higher quality and reduced noise levels, in addition to higher production rates.

Gear polishing applications can provide improvement in surface quality. While fine grit vitrified bond systems are used as a finishing section for some applications, polishing wheels which have a soft, rubber-like bond are used for higher quality finishes. This polishing may come at a cost of a loss in geometry since they are not geometrically stable.

The dressing tools used for truing and dressing gear grinding wheels determine the ability of the process to achieve the desired geometry on a ground gear. A high precision dresser is critical to enable a gear to stay within tolerance—even at a loss of a couple of microns due to polishing.

The increased quality and production requirements for new generation gears generally require shorter dressing intervals for all gear grinding applications. Only a dressing tool tailored to the process can withstand the wear and tear and provide a longer tool life.

HISTORY

It all started in 1977 with Dr. Michael Kaiser in his garden house, who developed a rotary diamond dressing disc to be used with CNC grinding machine axis movements to profile dress multiple work piece forms with a single rotary dressing tool. As Dr. Kaiser continued the product development of the NC style dressing tool, the company delivered its first product—stationary diamond dressing tools.

In 1979, DR. KAISER DIAMANTWERKZEUGE GmbH & Co. KG was formally established and started producing rotary diamond dressing tools in a small part of an old textile manufacturing factory.

DR. KAISER continued to refine the utility of existing tools and develop new tools for additional applications.

In 1986, the company introduced diamond wear protection components and point crushing dressers for the profiling of vitrified diamond grinding wheels.

The dressing spindle department was established in the same year to maximize the performance of DR. KAISER rotary dressing tools.

One of DR. KAISER's biggest milestones was reached in 1989 with the establishment of an electroplating department. The new department produced positive electroplated dressing tools to satisfy the special dressing needs of the gear grinding world.

In the early 2000s, DR. KAISER began producing super-abrasive grinding wheels in vitrified and electroplated bonds. The development of special grinding wheel production combined with other DR. KAISER dressing product offerings enabled the company to be known as a system supplier, delivering dressing, and grinding process solutions to customers all over the world.

APPLICATION ENGINEERING

Our continuous innovation in dressing and grinding applications is driven by our customers' requests for solutions to increasingly challenging process requirements. This customer challenge has made it necessary for DR. KAISER to establish an in-house Application Engineering department in 2017.

Since DR. KAISER products are present in all industries and grinding operations, our application engineering team includes experts from many dressing and grinding backgrounds. As a system supplier, our team is available to discuss questions related to dressing, grinding, and all contiguous topics. Our team can test and evaluate current and new processes to assist in finding a solution for application problems all over the world. This is done via remote support or in person.

Additionally, the application engineering team is available to train customers at remote or customer sites. We have a fully staffed training facility in Celle, Germany to train users in all manner of dressing and grinding technology.

In 2023 alone, DR. KAISER will host 15 seminars—equivalent to nearly 40 days of customer training. We have presented many English-speaking in-house seminars in host countries. For the first time this year, we held a three-day seminar at our headquarters in Celle for an English-speaking audience. The participants travelled from all over the world to learn the basics of dressing, grinding, and advanced process optimization techniques. The customer training course is taught through a structured mix of theory and practice on our testing machines.

DR. KAISER'S NEW COMPANY CAMPUS

DR. KAISER understands that innovation leads to growth, requiring increased production capacity to deliver the range of tools to meet the needs of the marketplace. Following the introduction of the Application Engineering team, the company began its move to a new location. This new DR. KAISER campus allows existing departments to relocate with little disruption to current production.

The gear grinding industry has been one of the company's most important fields of activity since 1989. Due to the constant focus on this market, DR. KAISER is an original equipment manufacturer for many producers of gear grinding machines. As part of the new location, a new state-of-the-art production facility for electroplated gear dressing tools will go into operation in late 2023. In the next few years, all production departments will be relocated, allowing for increased tool production capacity.

With the move to our new production campus, future market requirements for tools produced in each of the DR. KAISER business units can be satisfied in the shortest time possible. Regardless of the application—whether it is profile grinding, generating grinding, or bevel gear grinding—we service all machine tool brands.

GEAR DRESSERS

Dressing tools for gear grinding applications must combine long tool life with the ability to provide the correct wheel profile to produce the accurate gear tooth geometry and the best surface finish.

"LINE BY LINE" DRESSER FOR GENERATIVE GRINDING

The generating method of gear grinding is one of the most effi-

PGM (MULTI-RIB) DRESSERS FOR GENERATIVE GRINDING



The use of PGM (Multi-Rib) dressers is one of the most efficient methods of dressing generating gear grinding wheels. These reverse electroplated dressers, designed for a single gear form, are capable of dressing all starts of the grinding worm wheel at once, which significantly reduces dressing time.

Significant engineering requirements are needed during the design and manufacturing of dressing tools used in generating grinding. Our experts calculate and simulate the geometry for the required dressing tools based on your gear specifications.

DRESSERS FOR PROFILE GEAR GRINDING



Profile gear grinding is often used for gears that might be too large for

the generating grinding process or if batch sizes are small. This method grinds one tooth at a time. The dressing process is very flexible. The CNC profile dresser follows a path created by the grinding machines CNC control. Special profiles with tip reliefs and other modifications can be easily dressed into the grinding wheel. DR. KAISER's CNC profile dressers can be produced using natural mesh diamond or ultra-high quality CVD diamond which allows for a worn dressing tool to be reformed by a re-lap process, replicating the original tool accuracy and utility. Re-lapping is the "re-grinding" of the existing diamond surface after the dresser's initial use to achieve as close as possible the dresser's original nominal dimensions.

DRESSERS FOR BEVEL GEAR GRINDING

DR. KAISER has many years of experience in producing dressing tools for bevel gear grinding. This process requires a rotary dresser capable of dressing a grinding wheel in both perpendicular and parallel axis. We continue to rely on the latest generation of CVD diamonds to deliver the best and most consistent part finish. Bevel gear dressing tools can be re-lapped multiple times to continue the same level of quality seen with a new tool.

DR. KAISER's mission has always been to combine the highest precision and most efficient rotary dressing tool manufacturing technology. We combine this technology with the best application and process support as the all-in-one problem solver for our customers' needs.

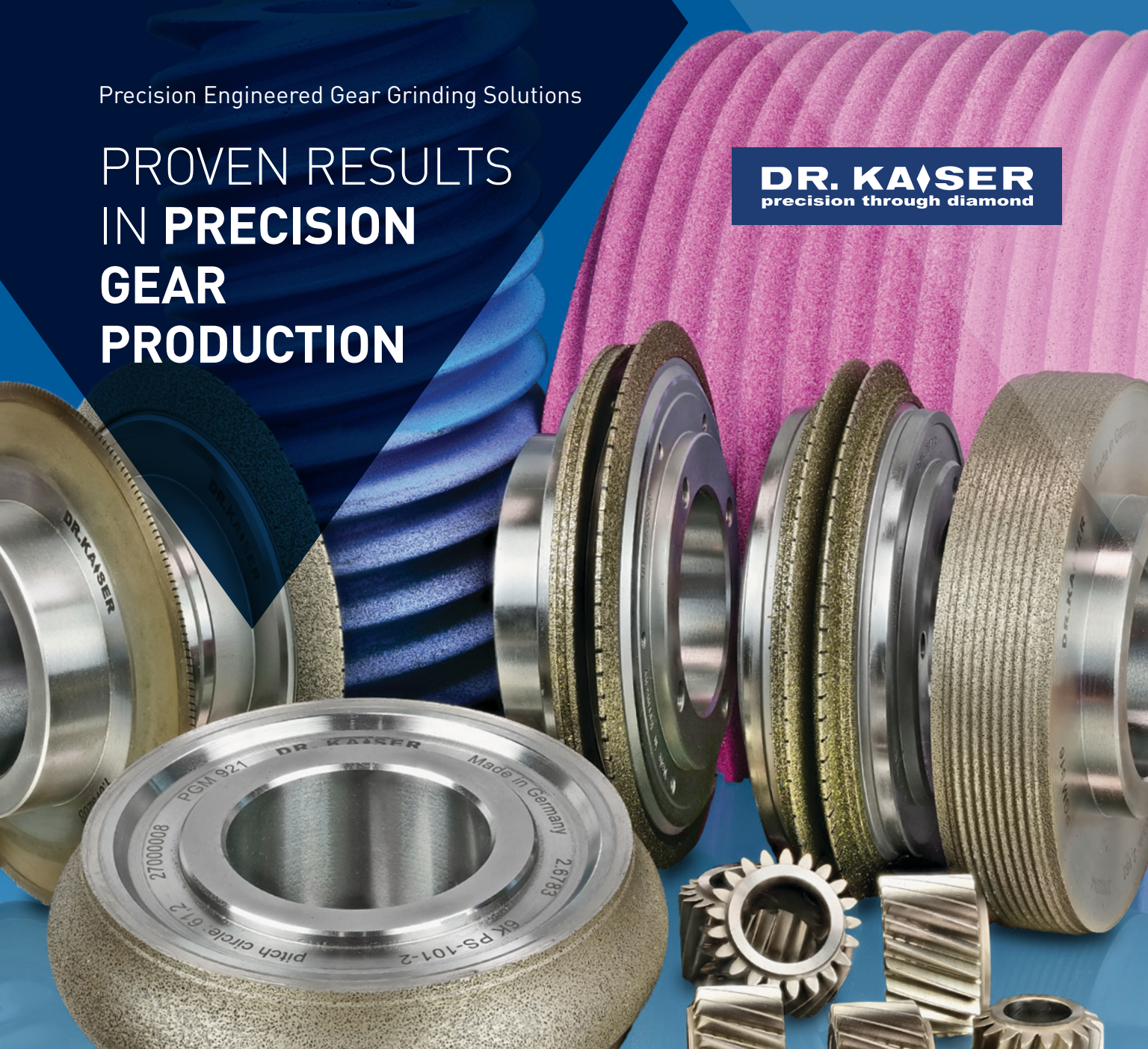
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DR. KAISER
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EDUCATION

COURSES

The education courses at the 2023 Motion + Power Technology Expo offer exclusive access to a wide-ranging series of technical seminars taught by industry leaders and insiders.

From novice to expert, there are courses for all career levels. Each course is conveniently situated just steps from the Expo floor so you can combine classroom learning with hands-on experience with the equipment.

Admission to the exhibit hall is included with your seminar registration.

Monday, October 16 – Wednesday, October 18

AGMA FALL TECHNICAL MEETING

Technology is changing manufacturing, so to keep up in today's marketplace, designers and manufacturers must follow emerging trends and communicate the latest ideas with fellow experts in the field. AGMA's in-person Fall Technical Meeting (FTM) is the perfect forum for this. AGMA selects authors to write peer-reviewed technical papers on gear industry topics. Topics include: design, analysis, manufacturing, quality, materials, metallurgy, heat treatment, operation, maintenance, efficiency, and gear failure. Authors present their papers in a single-track conference. Full registrants receive copies of all papers, can see all presentations, ask the presenters questions, and network with their peers over three days.

Tuesday, October 17

BASICS OF GEARING

8:00 am – 5:00 pm

William Mark McVea, KBE+, Inc.

Dramatically improve your knowledge and productivity through Basics of Gearing. This course will be presented in a two-day format and will give you a comprehensive overview of standard gearing nomenclature, gear involute geometry, inspection procedures, and much more.

INTEGRATION AND TRADE-OFFS IN GEAR AND BEARING SYSTEMS

8:00 am – 5:00 pm

Michael Berhan, Ford Motor Company

The purpose will be to cover the concurrent design and analyses of gears and bearings in integrated systems like gearboxes, transmissions, and electric motor drives, so as to allow for good integration and faster optimization of the overall system. This will help gear engineers and suppliers better determine the trade-offs with the bearings, help bearing engineers and suppliers similarly with the gears, and system engineers better understand both. The examples covered are generic but should be useful both within and across industries that use these components and systems.

DESIGN BASICS FOR SPUR AND HELICAL GEARS

8:00 am – 12:00 pm

Terry Klaves

Learn how to develop and understand customer gear drive application specifications and target performance expectations. Review, calculate and select basic gear terminology variables and design parameters which define tooth bending and contact rating safety factors on two real-life examples. Learn how to optimize gear fatigue Safety Factors for a given target design life and fit new gear designs and ratios into existing center distance using profile shift. Use commercially available software to develop gear geometry factors, calculate and optimize gear set power density and performance. Review common gear failure modes if the design or final accuracy does not meet application requirements. Discuss time and cost of more than 20 other gear drive component functions and drive development steps through prototypes to shipment of compliant assembled production drives. There will be an opportunity to discuss gear design challenges which may be unique to participant industries.

LOADED TOOTH CONTACT ANALYSIS

1:00 pm – 5:00 pm

Terry Klaves

Evaluation of loaded tooth contact and development of tooth modifications using commercially available software to improve Khb and optimize power density. Two real life gearing examples will be presented in the course, one will have a cantilever mounted pinion, the other a shaft pinion straddled non-symmetrically by bearings. Both examples demonstrate component deflections under load which significantly reduce tooth mesh contact which is then corrected with developed helix and profile modifications. Other gear performance optimization tools will also be



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MOTION +
POWER EXPO



briefly discussed: Profile Shift, Isotropic Finishing, Shot Peening, Accuracy, and Material Selection.

Wednesday, October 18

BASICS OF GEARING

8:00 am – 5:00 pm

William Mark McVea, KBE+, Inc.

Dramatically improve your knowledge and productivity through Basics of Gearing. This course will be presented in a two-day format and will give you a comprehensive overview of standard gearing nomenclature, gear involute geometry, inspection procedures, and much more.

INTEGRATION AND TRADE-OFFS IN GEAR AND BEARING SYSTEMS

8:00 am – 12:00 pm

Michael Berhan, Ford Motor Company

The purpose will be to cover the concurrent design and analyses of gears and bearings in integrated systems like gearboxes, transmissions, and electric motor drives, so as to allow for good integration and faster optimization of the overall system. This will help gear engineers and suppliers better determine the trade-offs with the bearings, help bearing engineers and suppliers similarly with the gears, and system engineers better understand both. The examples covered are generic but should be useful both within and across industries that use these components and systems.

WHY BEARINGS ARE DAMAGED

1:00 pm – 5:00 pm

ABMA

The American Bearing Manufacturers Association is offering this course on rolling element bearings for those involved in industrial equipment design, reliability, and maintenance. It will include a basic overview of rolling bearings, their selection, precision and mounting considerations, service life estimation, and lubrication-related influences. A hands-on damage analysis session will be the featured portion of this program.

Thursday, October 19

MODERN AUTOMATED GEAR QUALITY ASSESSMENT TECHNOLOGY

8:00 am – 5:00 pm

William Mark McVea, KBE+, Inc.

This course is intended to provide you with a thorough understanding of the information contained within a typical gear inspection report. Specifically, we will look at the contents and meaning of the information contained within the gear charts, as well as the techniques used by the gear measurement system to assess gear quality. An explanation of

basic gear measurement techniques, how measurement equipment and test machines implement these techniques, and how to interpret the results from these basic measurements will be covered. We will also discuss how to interpret the results and what corrective actions may be considered if the quality of a particular gear is unsatisfactory.

MATERIALS SELECTION AND HEAT TREATMENT OF GEARS

8:00 am – 5:00 pm

AGMA and ASM International

Because of their unique contribution to the operation of so many machines and mechanical devices, gears have received special attention from the technical community for more than two millennia. New developments in gear technology, particularly from the materials and heat treatment perspectives, have improved gear performance. This course, developed jointly by AGMA and ASM International, will provide an overview of materials selection and heat treatment of gears. Topics covered include: Gear material selection, heat treatment, material hardenability, allow steel selection, gear failure concerns, manufacturing considerations, material form, cast iron, powdered metal, bronze and brass, and plastics.

PRICING

	Member	Nonmember
Fall Technical Meeting Full Pass	\$1,450	\$1,750
Fall Technical Meeting Single Sessions	\$425	\$525
Fall Technical Meeting Student Pass	\$250	\$250
Fall Technical Meeting Professor Pass	\$500	\$500
Basics of Gearing	\$1,025	\$1,100
Integration and Trade-Offs in Gear and Bearing Systems	\$900	\$975
Design Basics for Spur and Helical Gears	\$450	\$525
Why Bearings are Damaged	\$450	\$525
Loaded Tooth Contact Analysis	\$450	\$525
Modern Automated Gear Quality Assessment Technology	\$675	\$750
Materials Selection and Heat Treatment of Gears	\$675	\$750

2024 CALENDAR of EVENTS

Earn continuing education units. Learn from industry experts.
Network with your peers.

1/17-18/2024

INVOLUTE SPLINE DESIGN & RATING
Online

1/23/2024

**ANALYTICAL GEAR CHART
INTERPRETATION**
Online

1/30-2/8/2024

GEAR MATERIALS
Online

2/13/2024

**DESIGN BASICS FOR SPUR &
HELICAL GEARS**
Online

2/27-3/7/2024

GEARBOX CSI
Online

3/14-16/2024

AGMA/ABMA ANNUAL MEETING
Napa, CA

4/8-12/2024

**BASIC TRAINING FOR GEAR
MANUFACTURING**
Chicago, IL

4/16-19/2023

DETAILED GEAR DESIGN
Alexandria, VA

4/24/2024

3D PRINTING TOUR @ RAPID
Anaheim, CA

4/23-24/2024

**INTEGRATIONS & TRADE-OFFS IN
GEAR & BEARING SYSTEMS**
Detroit, MI

5/7-9/2024

**GEAR MANUFACTURING &
INSPECTION**
Philadelphia, PA

5/16/2024

**ANALYTICAL GEAR CHART
INTERPRETATION**
Online

5/21-23/2024

GEAR FAILURE ANALYSIS
Chicago, IL

Spring 2024

**STRATEGIC NETWORKING &
LEADERSHIP FORUM**
Milwaukee, WI

6/4-6/2024

GEARBOX SYSTEMS DESIGN
Clearwater Beach, FL

6/13/2024

LOADED TOOTH CONTACT ANALYSIS
Online

6/17-18/2024

INVOLUTE SPLINE DESIGN & RATING
Online

6/25-27/2024

**FUNDAMENTALS OF GEAR DESIGN &
ANALYSIS**
Rosemont, IL

7/24-25/2024

**OPERATOR PRECISION GEAR
GRINDING**
Online

7/30-8/1/2024

BEVEL GEAR SYSTEMS DESIGN
Rosemont, IL

8/6-8/2024

**GEAR HEAT TREATMENT
OPERATIONS**
Cleveland, OH

8/12-13/2024

**OPERATOR HOBBING & SHAPER
CUTTING**
Chicago, IL

8/14-15/2024

**BASIC GEAR INSPECTION FOR
OPERATORS**
Chicago, IL

8/14-15/2024

REVERSE ENGINEERING
Online

8/20/2024

**HOW TO READ & INTERPRET A GEAR
INSPECTION REPORT**
Online

9/10/2024

**DESIGN BASICS FOR SPUR &
HELICAL GEARS**
Online

9/16-20/2024

**BASIC TRAINING FOR GEAR
MANUFACTURING**
Chicago, IL

10/7-9/2024

FALL TECHNICAL MEETING
Chicago, IL

10/16-17/2024

CONDITION MONITORING
Online

10/22-24/2024

GEAR FAILURE ANALYSIS
Chicago, IL

11/12-21/2024

**GEAR SYSTEMS DESIGN FOR
MINIMUM NOISE**
Online

12/3/2024

**HOW TO READ & INTERPRET A GEAR
INSPECTION REPORT**
Online



American
Gear Manufacturers
Association®

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NETWORKING



EVENTS

FTM NETWORKING RECEPTION

Monday, October 16

6:00 pm – 8:00 pm

\$85

Join attendees from the Fall Technical Meeting for a fun networking reception at The Yard in Corktown! The reception is included in your registration for Full FTM attendees, but tickets are available for single session passholders and other MPT Expo attendees interested in fun, games, food, and drinks. The reception includes dinner and fun activities including axe throwing, board games, shuffleboard, fire pits, and cornhole.

Who should attend: The reception is included in your registration for Full FTM attendees, but the reception is open to anyone interested in joining the fun!

WOMEN IN MANUFACTURING AND ENGINEERING BREAKFAST

Tuesday, October 17

7:00 am – 9:00 am

\$50

AGMA and ASM are pleased to invite all women at MPT Expo to a networking breakfast where there will be a panel of industry experts sharing experiences and advice about how to become leaders in your field and how to avoid complacency in the workforce to advocate for your own career. Join others from all sectors of manufacturing and engineering, from new employees to high-level executives, to build new relationships, grow your network, and innovate for the future. Who should attend: All women exhibiting or attending Motion + Power Technology Expo, the Heat Treat Conference & Exposition, or IMAT events who want to network and be inspired!

OPENING NIGHT WELCOME RECEPTION

Tuesday, October 17

5:00 pm – 6:00 pm

FREE to all attendees

Join us on the show floor for the Opening Night Welcome Reception on October 17 at 5:00 pm. Your expo pass includes two drink tickets and hors d'oeuvres will be served. Come meet exhibitors, network with your peers, and meet new friends as we kick off MPT Expo! Who should attend: All attendees and exhibitors.

WEDNESDAY NETWORKING RECEPTION

Wednesday, October 18

6:00 pm – 9:00 pm

\$100

Get ready for the ultimate networking event of the year! Join IMAT, Heat Treat, and MPT attendees for this year's event at the Waterview Loft at Port Detroit. Prepare to be entertained throughout the night with captivating performances and surprises that will keep you on the edge of your seat. Don't miss out on this incredible opportunity to connect with industry professionals while indulging in delectable local cuisine, cocktails, and mind-blowing entertainment.

Who should attend: All those attending or exhibiting at Motion + Power Technology Expo, the Heat Treat Conference & Exposition, or IMAT events.

AGMA ELECTRIC VEHICLE TECHNOLOGY TOWN HALL

Thursday, October 19

8:00 am – 10:00 a.m.

FREE

For more than 100 years, AGMA has led discussions in standards development for the gear industry. From streetcars to wind turbine technology, AGMA has been the facilitator-in-chief bringing together stake-





holders to discuss, brainstorm, share, and collaborate in the development of standards that are utilized by entire industries across the globe. Electric vehicle technology is emerging as a mainstream technology, and to keep within its traditional role as the facilitator-in-chief, it is time for AGMA to gather experts and begin discussion on standards for this space.

The two-hour town hall style meeting will begin with a short presentation by AGMA leadership on what current AGMA documents are available for use in the EV space. Next, attendees will be invited to share their thoughts on the current state of the EV

sector including areas and topics where AGMA could step in to support the gear industry. Drawing on its 100+ year experience, the goal of this event is for AGMA to gather the experts around a table to discuss outstanding issues identified by consensus and collaborate on consensus based, mutually beneficial solutions as it relates to the EV sector. Come be a part of the discussion!

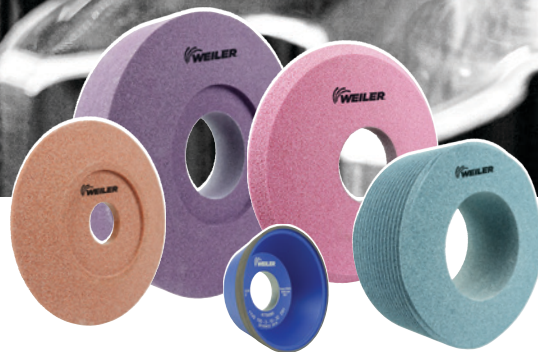
Who should attend: This meeting is open to all interested from the gearing industry, specifically those involved in the electrical vehicle space. Participants should expect, and be ready and willing, to collaborate and share knowledge.

STRUGGLING TO MEET DEADLINES BECAUSE OF PRODUCTION DELAYS ON GEAR GRINDING MACHINES?

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FALL TECHNICAL MEETING

2023

Take a deep dive into the gear industry at AGMA's Fall Technical Meeting.

This meeting brings together top researchers from across the globe who will provide the latest information on their peer-reviewed gear industry research. Network with the industry experts, academics, and engineers; ask your burning questions; and see what is in the future of this industry.

Monday, October 16

1:00 pm – 5:00 pm

TECHNICAL SESSION 1 – EFFICIENCY, LUBRICATION, NOISE, AND VIBRATION

- **How Many Speed Ratios for Electric Cars? One Example**
Dr. Bernd-Robert Höhn, Gear Research Center (FZG), Technical University of Munich
- **Cross-Correlation of Design Variables for Epicyclic System**
Dr. Claudio Autore, Ferrari S.p.A.
- **Particle-Based CFD Study of Lubrication in Power Transmission Systems Using Local Refinement Techniques**
Benjamin Legrady, Dive Solutions GmbH
- **Modeling Lubricated Flow and Thermal Response for Gears**
Dr. Weixue Tian, ExxonMobil Technology and Engineering Company

Tuesday, October 17

8:00 am – 12:00 pm

TECHNICAL SESSION 2 – MATERIALS AND HEAT TREATMENT

- **Influence of Precipitation Conditions on the Tooth Root and Pitting Load Carrying Capacity of Carbonitrided and Low Pressure Carburized Gears**
Niklas Blech, Gear Research Center (FZG), Technical University of Munich

- **Methodology to Evaluate the Bending and Contact Allowable Stress Numbers of Gear from Rotating Bending Database**
Dr. Luc Amar, CETIM
- **Advanced Distortion Control for Case Hardening of Transmission Components**
Dr. Volker Heuer, ALD Vacuum Technologies GmbH
- **SPECIAL PRESENTATION: Updates to AGMA 926 – Recommended Practice for Carburized Aerospace Gearing**
Scott Davidson, AGMA Aerospace Gearing Committee/Boeing Rotorcraft – Philadelphia

1:00 pm – 5:00 pm

TECHNICAL SESSION 3 – GEAR WEAR AND FAILURE

- **Non-Linear Analysis of Gear-Fatigue-Damage Under Variable Load**
Daniel Vietze, Gear Research Center (FZG), Technical University of Munich
- **Use of Gear Reliability Data in a Cloud-Based Gearbox Digital Twin**
Alberto Satine Gioiosa, Hexagon
- **Wear Behavior of Polymeric Compound Measured on a New Test Rig for Plastic Gears**
Dr. Riccardo Longato, Longato Riccardo Srls
- **Tooth Flank Fracture – Investigations on the Influence of Overloads on the Fatigue Strength of Case-Hardened Gears**
Sascha Rommel, Gear Research Center (FZG), Technical University of Munich
- **Experimental and Analytical Study of the**

Effect of Shot Peening on Gear Micropitting and Contact Fatigue Failure

Dr. Dalia Jbily, CETIM

Wednesday, October 18

8:00 am – 12:00 pm

TECHNICAL SESSION 4 – MANUFACTURING, INSPECTION, TESTING, AND QUALITY CONTROL

- **Laser Material Processing for the Production of Bronze Coatings for Tribological Applications**

Dr. Hannes Freisse, Kugler Bimetal SA

- **Influence of Tooth Root Contour Deviations on the Tooth Bending Strength**

Christian Eggert, Laboratory for Machine Tools and Production Engineering (WZL), RWTH Aachen University

- **Power Skiving Tool Offsets and the Feasibility of Using a Calculator for Manipulating the Resulting Geometry**

Bethany Cousins, The University of Sheffield Advanced Manufacturing Research Centre (AMRC)

- **Virtual End of Line Test – Prediction of the Acoustic Behavior of Gearboxes Based on Topographic Deviations Using Neural Networks**

Marius Willecke, Laboratory for Machine Tools and Production Engineering (WZL), RWTH Aachen University

1:00 pm – 5:00 pm

TECHNICAL SESSION 5 – APPLICATION, DESIGN, AND RATING

- **Holistic Assessment of Drive Systems with Gears, Shafts and Bearings Using Measured Torque-Speed Data**

Dr. Ulrich Kissling, KISSsoft AG

- **Local Load Capacity Analysis for the Design of a Balanced Flank Modification for Cylindrical Gears According to Bevel Gear Procedures**

Dennis Tazir, FVA GmbH

- **Determination of the AGMA J-Factor for Internal Spur Gears**
Prof. José Pedrero, UNED and Prof. Alfonso Fuentes, Rochester Institute of Technology
- **Flexible Planet Pins for High Torque Epicyclic Gears: Experience with Design, Manufacturing and Application**
Hanspeter Dinner, KISSsoft AG
- **Numerical Approach to Account for Actual Tooth Root Geometry**
Dr. Burkhard Pinnekamp, RENK Group

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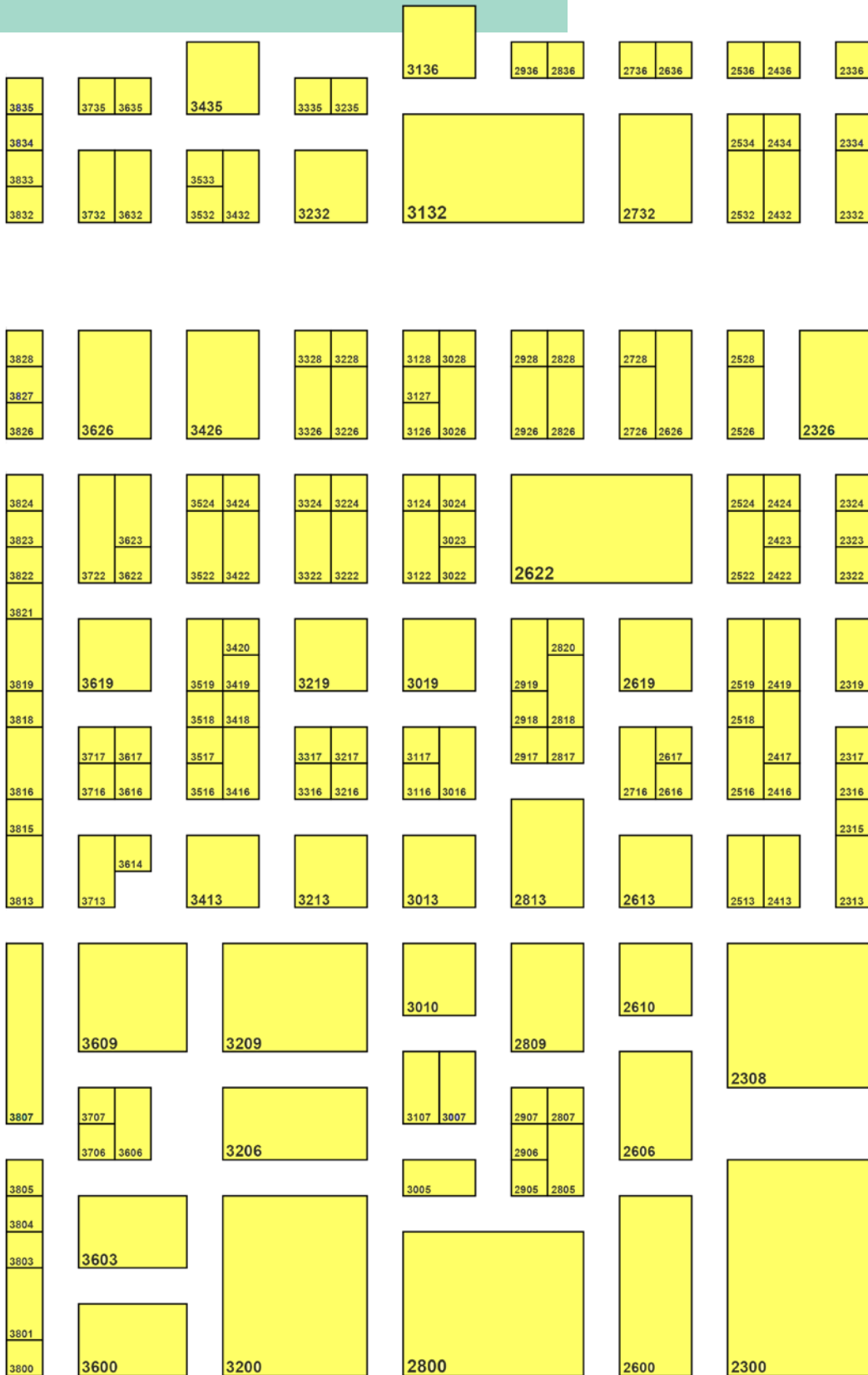
WD Quality Creates Value

PHILADELPHIA GEAR

POWER SYSTEMS BY TIMKEN

Cotta

MPT EXPO FLOOR PLAN



Entrance

EXHIBITOR LIST

Company	Booth
Aalberts Surface Technologies	3706
Adelbert Haas LLC	3626
ADF Systems Ltd.	3722
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Broach Masters/Universal Gear Co.	3606
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Capstan Atlantic	2413
CBT	2636
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WFL Millturn Technologies	3419	
Yager Gear Enterprise Co., Ltd.	2536	
ZERUST Corrosion & Cleaning Solutions	3418	



K 160

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AALBERTS SURFACE TECHNOLOGIES – BOOTH #3706



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We provide complete heat treatment solutions for your gears including Gas, Ion, S-Phase, or Solution Nitriding, Ferritic Nitrocarburizing (FNC), Vacuum Hardening, and more. Achieve low distortion, higher wear durability, and greater fatigue resistance.

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Aalberts surface technologies has 17 locations in the US with the resources for not just the right solutions, but the best ones.

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ADELBERT HAAS LLC – BOOTH #3626

Multigrind® grinding centers are found in state-of-the-art manufacturing facilities worldwide. Our Multigrind® CB, CA, CU, and Radical grinding centers are used in industries like medical engineering, precision tool manufacturing, gear manufacturing, the aerospace industry, and the energy industry. Haas customers demand precision, surface quality, and efficiency.

Gear Industry applications include:

- Gears and Geared shafts
- Worms and threads
- Gear Tool Manufacture and Re grind: Hobs, Shapers, Stick Blades

ADF SYSTEMS LTD. – BOOTH #3722



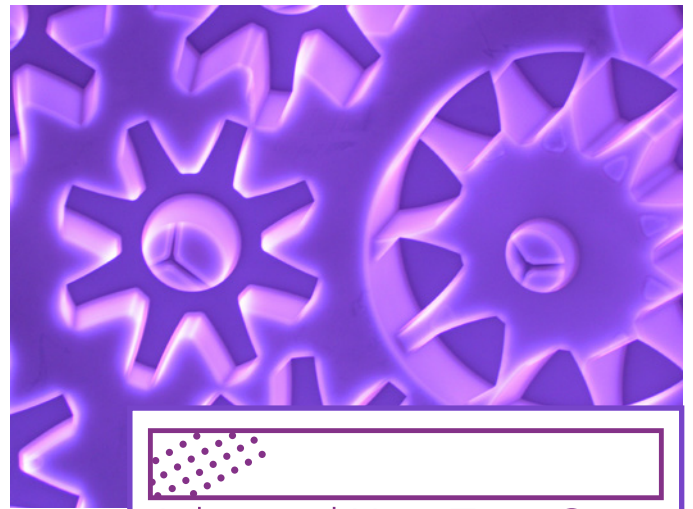
ADF Systems, Ltd. has been manufacturing aqueous cleaning systems since 1984 and has developed one of the larg-

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est families of parts washing equipment in the industry. If a catalog washer will not fit your application, ADF will custom build a washer to fit your application.

ADF has manufactured equipment for many applications such as Aerospace, Medical, Pharmaceutical, Automotive, Rebuilding, and other Industries. Difficult to clean applications such as lapping, buffing, and grinding operations are easily handled with ADF high pressure systems with working pressures of 500-1000 PSI.

ADVANCED HEAT TREAT CORP. – BOOTH #2836



Advanced Heat Treat Corp.

Established in 1981, Advanced Heat Treat Corp. (AHT) is a recognized leader in providing heat treat services and metallurgical solutions to companies across the globe. Their UltraGlow® family of processes includes:

- Plasma/Ion Nitriding
- Ferritic Nitrocarburizing (FNC)
- Gas Nitriding
- UltraOx® (alternative to QPQ, Salt Bath, Chrome Plating, Nickel Plating)
- Through Hardening
- Carburizing
- Carbonitriding
- Induction Hardening
- Annealing and more.

AHT has a total of four locations: two heat treat facilities in Waterloo, Iowa; one in Monroe, Michigan; and another in Cullman, Alabama.

For more information on AHT and its services, please visit www.ahtcorp.com.

ADVANCED NITRIDING SOLUTIONS – BOOTH #2323

Advanced Nitriding Solutions is a commercial heat treating company specializing in nitriding, providing innovative nitriding solutions to customers across the globe.

Processes we provide: Plasma Nitride, Gas Nitride, Ferritic Nitrocarburizing, Plasma Nitrocarburizing, Black Oxide.

As a specialist in nitriding, we not only can achieve customer specifications where others were incapable, but also

show improvements in life expectancy and consistency in more typical processes. Our engineers work as part of the customers' engineering team to solve case hardening issues as well as develop application specific nitriding solutions. Our metallurgical knowledge combined with nitriding application experience makes Advanced Nitriding Solutions the lead choice for customers.

Contact us at www.ans-ion.net.

ADVENT TOOL & MANUFACTURING – BOOTH #3235



Advent Tool & Manufacturing, Inc. was established in 1974 as a job shop serving the manufacturing industry in applications requiring close tolerance standards. Advent began supplying high quality thread mill tooling to manufacturers across the country and in 2006, expanded into spline, gear and custom form milling cutters.

A continuous goal of Advent Tool & Manufacturing, Inc. is to supply machine shops and manufacturers across the globe with solid carbide, inserted thread mills, and custom form mills specifically designed to meet our customers' machining needs while focusing on job adaptability, longer tool life, and faster cycle times.

SEE OUR AD ON P. 9

AFFOLTER – BOOTH #3522

About Affolter Group:

Tradition meets innovation: The Affolter Group is a family enterprise and world technology leader in high-precision gear cutting solutions with more than 160 employees around the globe. The highly specialized company was founded in 1919 by Louis Affolter in Malleray, Switzerland. The more than 100-year history of the Affolter Group was filled with technological innovations. Today, the fourth generation leads the family



enterprise. The Affolter Group SA operates worldwide with a broad network of distributors.

Affolter Group SA develops and manufactures CNC horizontal gear hobbing machines for gear cutting of spur, helical, conical, or bevel teeth on pinions, wheels, shafts, cylinders and worms up to a module of 2.0 (12.7 DP). The Affolter AF160 can produce a wide variety of gears and worm screws and is ideal for manufacturers in the automotive, aerospace, aircraft, gearbox, medical, and robotics industries.

The new Affolter AF160 for the North American Market:

When developing the AF160, maximum flexibility, reliability and precision were the key goals of the engineering department of the Swiss family enterprise Affolter Group. Vincent Affolter, Managing Director of the Affolter Group, explains: "The AF160 is designed for high precision manufacturers that need flexibility and efficiency. With its eight axes, sophisticated automation solutions, and an innovative quick-change system, the machine provides exactly that."

Do you need to produce gears in small or large runs? The AF90 is the perfect compact machine to replace conventional gear hobbing machines. The AF100plus is a step up with large flexibility and options for automation. The AF160, the NEW machine that can do it all, includes a telescopic loader for high production runs.

See us – we can offer custom solutions.

For more information, please visit: www.affoltergroup.ch.

AGMA - BOOTH #3132



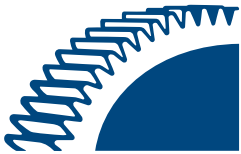
American
Gear Manufacturers
Association®

Welcome to the American Gear Manufacturers Association!

The American Gear Manufacturers Association (AGMA) is an association of more than 400 companies, consultants, and academicians with direct interest in the design, manufacture, and application of gears and flexible couplings. AGMA is also the owner of Motion + Power Technology Expo. Founded in 1916, AGMA conducts programs for and provides services to the gear industry and its customers. AGMA is accredited by the American National Standards Institute to write all U.S. standards on gearing.

SEE OUR AD ON P. 21

AGMA FOUNDATION - BOOTH #2732



AGMA
Foundation®

Our mission is: Recruiting, educating, and keeping the power transmission workforce current with emerging technology.

The AGMA Foundation is the charitable arm of AGMA. Since its founding in 1994, the AGMA Foundation has provided more than \$300,000 in scholarships to students at technical schools, undergraduate and graduate studies with an emphasis on gearing. In addition, the Foundation has provided more than \$1 million for projects on research, education development, workforce development, including the popular "Get Into Gears" toolkit, and emerging technology efforts for the gear industry.



Please send your budding gear industry students to our website to apply for the scholarships. And come and download the Get Into Gears Toolkit for your recruiting needs.

www.agmafoundation.org

Cookies for a Cause. At 2:00 pm on Wednesday – Stop by the booth to get a fresh baked cookie and your Gear Geek sticker and to make a donation to an organization whose complete focus is on YOUR industry.

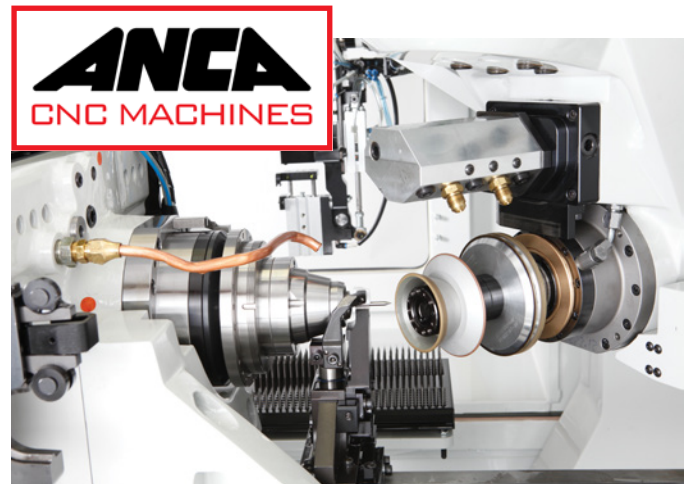
MPT EXPO EXHIBITOR LISTINGS

AMPER - BOOTH #3822



Whether you run a small shop or manage an entire manufacturing plant, Amper is the only production management solution that gives you the roadmap to connect your people, processes and assets in one place. Get the tools you need quickly and easily—no complex integrations or learning curves. With our deep manufacturing expertise and library of resources, we will guide you on your journey to success, helping you get real-time visibility into every corner of your shop floor—without overwhelming you with thousands of data points. Because running your shop shouldn't be so damn hard.

ANCA CNC MACHINES - BOOTH #3232



ANCA CNC Machines is a global leader in the design, manufacture, and service of advanced CNC grinding machines. With an illustrious history spanning over 50 years, ANCA is renowned for its cutting-edge technology, innovative solutions, and exceptional customer support. ANCA's comprehensive range of products includes tool grinders, CNC grinding machines, software, and automation solutions, catering to diverse industries such as aerospace, automotive, medical, and general manufacturing.



ANCON GEAR & INSTRUMENT - BOOTH #2524

Highest Quality Manufactured Precision Gears!

Ancon Gear is a second-generation, family-owned manufacturing facility. We supply some of the world's top companies with precision gears and machined products. We use the most modern manufacturing techniques and equipment available, such as cellular manufacturing and CNC hobbing/shaping, to ensure the highest quality product leaves our facility. Ancon Gear is an ISO9001/AS9100 registered company. If you have any questions or special manufacturing needs, please do not hesitate to call or email us.

APG - BOOTH #3517



VISIT US ONLINE AT WWW.CALLAPG.COM

With 80+ years of industry expertise, APG is the premier source for fluid sealing and conveyance components. We're your trusted supply chain partner, boasting extensive inventory and rapid delivery, sometimes within hours. Our ISO 9001 certification ensures top-quality products, bolstering your reputation and customer satisfaction. Streamline your orders with our versatile omnichannel system—online, phone, email, or custom EDI solutions—saving you valuable time and reducing costs.

Visit Us Online at www.callapg.com.

ASH GEAR & SUPPLY - BOOTH #3518



Gear cutting tools and supplies

Ash Gear has provided the gear industry with new and pre-owned gear tooling for over 60 years. Our stock includes hobs, shapers, shank shapers, broaches, master gears, gear measuring wires, software, books and more.

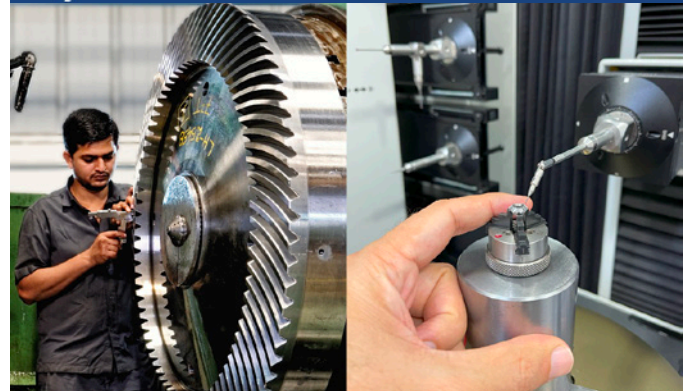
These tools are for the production of spur gears, helical gears, worm gears, involute splines, parallel splines, serrations, roller chains, timing belts, silent chains, and much more.

BALANCE SYSTEMS CORPORATION - BOOTH #2424



At Balance Systems we create technologically advanced products for two core businesses: Manual, semi-automatic and automatic customized balancing machines for a wide range of sectors and Process control systems with specific functions suitable to grinding machines: automatic grinding wheel balancing (1 and 2 planes), touch detection (gap & crash), comparative and absolute in-process gauging.

BEVEL GEARS INDIA PVT. LTD. - BOOTH #3616



Bevel Gears (India) - The Bevel Gear Specialists!

Bevel Gears India has manufactured and designed bevel gears and bevel gear boxes for over 40 years. With over 75 bevel gear grinding, cutting, testing and lapping machines, customers' bevel gears are manufactured to DIN and AGMA standards using the Gleason and Klingelnberg systems.

Bevel Gears India caters to the requirement of end users of ground spiral bevels, spiral bevels, straight bevels, Zerol bevels, angular bevels and hypoids.

Customers are invited to leverage our capabilities, decades of experience, Gleason CAGE prepared summaries, and CNC gear testing and production facilities to develop the gearing solutions they need for demanding applications.

Services:

- Spiral Bevel
 - Ground: 0.8 - 28 in
 - Lapped: 0.4 - 63 in
 - Hard Cut: 3 - 48 in
- Straight Bevel
 - Cut: 0.4 - 75 in
 - Ground: 0.4 - 8 in
- Skew / Helical Bevel: 2 - 40 in
- Angular bevels & Zerol gears
- High Ratio Hypoids
- Cube Gear Boxes
- Reverse engineering
- 3D gear modeling
- CNC gear measuring services
- Stock bevel gears including ground spiral and Zerols - imperial and metric
- 5-axis machining

BIJUR DELIMON INTERNATIONAL - BOOTH #2522

Our products range from simple single-point grease feeders to complex automatic systems delivering oil or grease to hundreds of lubrication points. Bijur Delimon International also produces industrial cooling products backed by world-class on-site service and support worldwide.

BLASER SWISSLUBE, INC. - BOOTH #3416

Manufacturer of high quality cutting and grinding fluids.

Do you consider coolant to be a necessary evil? Productivity, economic efficiency and machining quality are all factors that critically depend on the choice and the quality of your metalworking fluid. With our profound know-how and experience, customized services and excellent products, we help you fully capitalize on the potential of your machines and tools and turn your metalworking fluid into a key success factor - a Liquid Tool. Visit our booth and discuss with our experts how we can support you in optimizing your machining processes.

Blaser Swissslube is a family-owned Swiss company founded in 1936. We are close to our customers in about 60 countries. We develop and produce high-quality cutting and grinding fluids, enabling our customers to produce, with great success, a wide range of products from the tiniest of

components to large, critical and structural components in all manufacturing industries. For more information, visit

www.blaser.com.

BOMATEC INTERNATIONAL CORP. - BOOTH #3524



Experience. Precision. Intelligence.

Bomatec—more than just magnets.

30 years of experience and success in the market have made Bomatec an important partner of leading industrial groups. We support our customers in development and manufacture the products that are incorporated in the customer applications of tomorrow. Our teams are trained to address the needs of our customers, understand the challenges, and accurately implement specifications according to customer requirements.

BOURN & KOCH INC. - BOOTH #3005



Custom Manufacturing Solutions by Bourn & Koch.

Bourn & Koch was founded in 1975 by Larry Bourn & Loyd Koch. With our acquisition of Barber-Colman in 1985, we entered the world of gear manufacturing machinery. Our focus for nearly 50 years has been providing custom engineered solutions to our partners in manufacturing with an emphasis on gear manufacturing machinery and precision grinding machinery.

Bourn & Koch supports Barber-Colman gear hobbing machines and Fellows gear shaping machines with parts and service as OEM, having every print, drawing, specification, and design in their machine tool archives. We also provide retrofit and remanufacture services for Fellows gear



shapers to breathe new life into old iron with updated controls and modern features and functions.

As part of InCompass™ Manufactured Growth Solutions, Bourn & Koch now is even better poised to deliver exceptional support to our partners. Bourn & Koch is now alongside Timesavers, Clausing, Colchester, DuBois, Randbright, and Mollart to provide machine tools, support, and custom solutions that evolve our DNA of manufacturing solutions and lasting partnerships.

BRELIE GEAR CO. – BOOTH #2807



Brelie Gear is a full-service gear manufacturer, specializing in fine- and medium-pitch spur and helical gears, worms, worm gears, and worm shafts. We offer gear crowning and carbide re-hobbing to improve gear quality and reduce gearbox noise. Our components are produced using

state-of-the-art Koepfer and Mitsubishi hobbing equipment. In addition to our gearing capabilities, we have complete in-house turning and machining capabilities for making blanks as well as any other machining needs you may have. Please give us a call to discuss your gearing and machining requirements.

BROACH MASTERS/UNIVERSAL GEAR CO. – BOOTH #3606



The quality and precision of our broaches and gears have won customers world-wide – from the smallest gear shop to NASA and the Mars Rover to the F35.

Precision manufacturing, modern equipment, and advanced technology, balanced with talented craftsmanship, means you get nothing but the very best in quality, efficiency and performance.

The Broach Masters has the ability to manufacture and repair tooling while running prototype and production parts. This gives you a distinct advantage over your competition. We do what others can't.

Broach Masters and Universal Gear are a complete source for all your tooling and production needs. We will supply you with the highest quality products and services that you and your customers expect.

BROACHING MACHINE SPECIALTIES – BOOTH #3533



Incorporated in 1946, Broaching Machine Specialties Company (BMS) offers customized broaching solutions for nearly any broaching requirement. Products and services include New turnkey broaching systems, Used and Remanufactured Broaching Machines, Broach cutting tools, Production broaching services, Spare parts and in field Service. Our products have been shipped to satisfied customers around the globe.

BMS manufactures New Broaching Machines including the "Dual Drive" Electro-Mechanical Table Up machine, New large capacity Single and Dual Ram broaching machines with Electro-Mechanical and hydraulic drives, the "Cruiser" Single Ram High Speed Vertical machine, and Horizontal machines.

BMS maintains the "World's Largest Inventory" of pre-owned broaching machines with Over 300 broaching machines and sharpeners in stock. These machines are offered Reconditioned or Completely Remanufactured to new machine specifications. All new and used machines are available as turnkey systems including all required engineering, tooling and SPC run-off.

CANTON DROP FORGE – BOOTH #3623



Welcome to Canton Drop Forge, die forgings since 1903.

Canton Drop Forge specializes in closed die forgings from ten-inch OD to 47-inch OD in carbon and alloy steels. We have many power steam hammers that range up to 50,000 pounds, complete heat treat facilities, inspection department, laboratory and modern CNC-equipped die shop.

CDF is ISO Certified.

CAPSTAN ATLANTIC – BOOTH #2413



CHEVRON LUBRICANTS – BOOTH #3824

Chevron is a leader in lubricant technology with over 100 years of experience of delivering innovative products that meet or exceed industry standards. Our Chevron family of products is recognized for technological innovation, performance and reliability.



Capstan Atlantic – The Powdered Metal Gear Specialists

Capstan Atlantic is a leading producer of precision powdered metal gearing and multi-level structural components. Combining advanced gear engineering with proprietary secondary operations, Capstan Atlantic offers precision powdered metal gears to meet demanding applications. Our process allows the customer to achieve original design tolerances, improved dimensional accuracy and reduced wear and noise characteristics while maintaining a cost advantage. We can produce AGMA class Q9 quality gears with our process.

CBT – BOOTH #2636



CBT is an unparalleled design-thinking and integration-engineering company. We utilize our unique expertise to bridge the gap between operational technologies and information technologies (OT and IT) and accelerate smart operations in process and discrete manufacturing, utilities, distribution and logistics, architecture, engineering, construction, and health and life sciences.

Our solutions are powered by next-generation innovations from an industry-leading partner ecosystem, led by Hewlett Packard Enterprise, Aruba, Intel, AMD, PTC, ABB, NVIDIA, and many more.

As a first mover and Domain Expert Integrator, CBT has a proven track record of taking customers from ideas to execution in production environments. Our solutions go beyond the data center to deliver business transformation across the enterprise.

CGI, INC. – BOOTH #2606

Since 1967, CGI has consistently been providing customers exceptional craftsmanship and outstanding customer service. Known as a world-class gear and precision component manufacturer, CGI also offers design and manufacturing of motion control subassemblies. Our team of highly skilled and diverse professionals will take your product from design through assembly. The USA-based manufacturing facility is fully certified to ISO 9001, ISO 13485, and AS 9100 quality standards.

CHUN YEH GEAR CO., LTD. – BOOTH #2936



Chun Yeh Gear, the Gear Manufacturer in Taiwan - Booth 2936

Chun Yeh Gear (CYG) is an expert with gear manufacturing experience of over 30 years that aims to provide our customers the products with the highest quality. CYG specializes in worms/worm gears, gearboxes, and other related mechanical parts. We do hobbing process, thread cutting process, and thread grinding process in our own factory.

Manufacturing capabilities range is as below:

- Worm
Module: 10
Outside Diameter: 400 mm
Length: 750mm
- Worm Gear
Module: 7
Outside Diameter: 600 mm
- Gear
Module: 7
Outside Diameter: 600 mm

CINCINNATI GEARING SYSTEMS – BOOTH #3213

Precision Gear Manufacturing and Design Engineering

Cincinnati Gearing Systems Inc. is a recognized leader in precision component gear manufacturing and design engineering. More than just a gear manufacturer, CGS offers



customers over 100 years of experience in producing high-quality, reliable, and cost-effective component gearing and gear units for a wide range of power transmission applications. Configurations include epicyclic gear units, multiple pinion gear units, parallel shaft designs, vertical and horizontal offsets, dual and single input, single & double helical, and hybrid designs. CGS has in-house full-service manufacturing, design engineering, testing, and heat-treating capabilities. Whether it is a clean-sheet design or a standard design, CGS is the single source to satisfy your specific gearbox requirements.



CINCINNATI STEEL TREATING – BOOTH #3213

2022 Commercial Heat Treater of the Year—MTI and Heat Treating Today



Quality Outsourcing Partner for Heat Treating Services

Cincinnati Steel Treating (CST) is an ISO certified outsourcing partner who helps manufacturing engineers and part designers strengthen gears and components with premiere heat treating applications. Our processes add durability and longevity to the life of your parts.

Serving domestic and global customers for over 80 years in the large gears, automotive, machine tool, bearing, heavy equipment, mining, tool and die, industrial knife, foundry, and steel fabrication industries.

CIRCLE GEAR AND MACHINE COMPANY – BOOTH #2417

Circle Gear is a leader in quality custom gearing, specializing in small- to medium-lot production. We are one of the only companies in the country that will reverse engineer and manufacture spiral bevel gear sets. Circle Gear services include: Bevel Gears (Straight & Spiral up to 36" diameter), Spur Gears, Helical Gears, Herringbones (up to 60" diameter), Internals, Racks, Sprockets, Worm and Worm Gears, to all other types of power transmission products. Circle provides servicing on Splines (involutes & straight-sided, internal & external). We offer reverse engineering as well as breakdown services on many products. Circle Gear currently resides in a 125,000 sq. ft. full-service production facility. We also house a full-service gearbox rebuild division, QRS, Quality Reducer Service. QRS specializes in rebuilds of all major brands of gear reducers as well as manufacturing of custom designed units.

WWW.CIRCLGEAR.COM

CLEVELAND DEBURRING MACHINE COMPANY – BOOTH #3424



Welcome to Cleveland Deburring Machine Company, Inc.

We're not jacks of all trades. We are a master of one. We're not a machining company or an automation company that happens to offer deburring services. We're a deburring company first.

At CDMC, we offer proven expertise across a large array of methods for deburring and metal finishing from brushing and grinding to abrasives and hard tools. And with capabilities including automation and parts-washing to add to our deburring machines, our team is ready to support you and your specific goals.



COLUMBIA GEAR CORPORATION - BOOTH #2522

Columbia Gear Corporation – Your custom gear supplier!

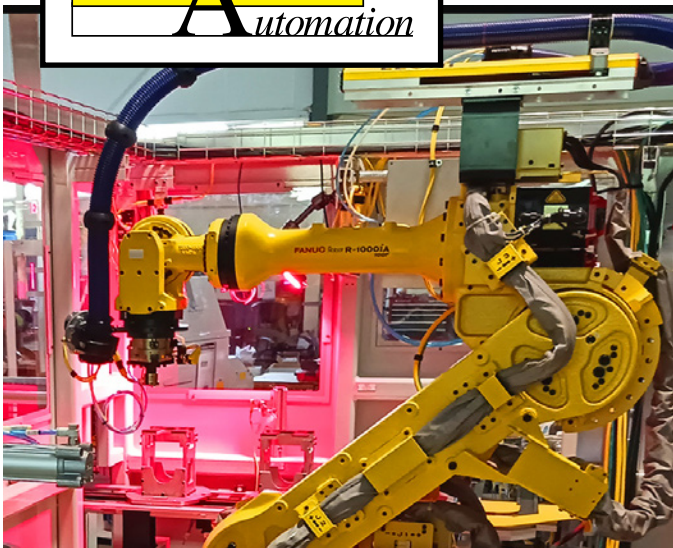


Columbia Gear Corporation is a premier supplier of custom gearing and power transmission products including precision spur and helical gears, splined gears and shafts and complete gearboxes. We are continually adapting to today's customer needs. We continually analyze manufacturing processes, build upon proven design solutions, streamline production and assembly schedules – always taking gearing quality to higher levels. Conveniently located in Central Minnesota, our facility encompasses 235,000 sq. ft.

Columbia Gear manufactures gears, shafts and power transmission products for the agricultural, aviation, construction, compressor, locomotive, mining, rail, oil & gas and wind power industries.

For more information, visit www.columbiagear.com.

CREATIVE AUTOMATION INC. - BOOTH #3617



MPT EXPO EXHIBITOR LISTINGS

Creative Automation, Inc. is an A3 Robotics Certified Robot Integrator and FANUC Authorized System Integrator. We specialize in machine tending, assembly systems, deburr, dispense and vision systems. We use advanced robotic and vision systems along with conveyors, lifts, gantries, and other subsystems to improve your production efficiency, throughput and reduce waste. We design and develop integrated systems with reduced life cycle costs.

Our full-time engineering, controls and production staff serve advanced manufacturing facilities throughout North America. We offer end-to-end lifecycle support for our automation projects and offer continuity through retool and facility transfer.

Creative Automation is ISO9001 2015 Certified.

CROIX GEAR - BOOTH #3219

Precision with purpose



Gears made with precision.
An exceptional customer experience.
Every gear.
Every order.
Every time.

From agriculture to warehouse automation, OEMs around the country rely on Croix Gear to keep their assembly lines running at maximum efficiency. While Croix Gear is recognized as a leader in the manufacturing of bevel gears, we have innovative capabilities to produce any type of gear with precision and efficiency. Our quality management system is certified to ISO 9001:2015.

SEE OUR AD ON P. 3

CUMI AMERICA - BOOTH #3519

Carborundum Universal Limited (CUMI), a US\$ 330 million company was founded in 1954 as a tripartite venture between the US\$ 4.8 billion Murugappa Group, India, Carborundum Inc, USA and the Universal Grinding Wheel Co Ltd, UK.

We are a precision surface engineering company pioneering in the field of abrasives and ceramics since 1954. We manufacture a wide range of abrasive products for high precision applications including gear grinding.

Our new generation high-performance engineered ceramic products for profile grinding (Single rib) and Generative grinding (Multi rib) help achieve consistent profile/lead accuracy with precise surface finish. Our wheels are time tested and compatible with all major gear grinding machines namely Reishauer, Liebherr, Gleason, Hofler-Klingelberg, Samputensili, Kapp Niles and Burri. We wish to bring these world class products closer to you by participating at the Motion and Power expo. Look forward to meet you there!

CURTISS-WRIGHT: METAL IMPROVEMENT COMPANY - BOOTH #3800



Curtiss-Wright Surface Technologies welcomes you to #3800

Curtiss-Wright Surface Technologies (www.cwst.com) is a world leader in providing treatment solutions for critical components operating in many industries. We provide shot peening & super finishing services to highly loaded gears and shafts of all sizes in all industries.

Through a network of 65 facilities in North America, Europe, China & India we also provide services of laser peening, analytical services & engineered coatings which include thermal spray, dry film lubrication and parylene conformal.

Should your components require enhanced performance in metal fatigue, lubricity, corrosion, wear or operate in harsh environments, please visit us in booth 3800.

DANA INCORPORATED - BOOTH #3532



Dana is a leader in the design and manufacture of highly efficient propulsion and energy-management solutions that power vehicles and machines in all mobility markets across the globe. The company is shaping sustainable progress through its conventional and clean-energy solutions that support nearly every vehicle manufacturer with drive and motion systems; electrodynamic technologies, including software and controls; and thermal, sealing, and digital solutions.

Dana Industrial leverages its global expertise to offer a complete portfolio of highly efficient power-transmissions, fluid-power technologies, custom gears and drives for industrial and stationary equipment applications.

Learn more on www.dana-industrial.com.

DELTA GEAR - BOOTH #3016

Delta Gear & Delta Research

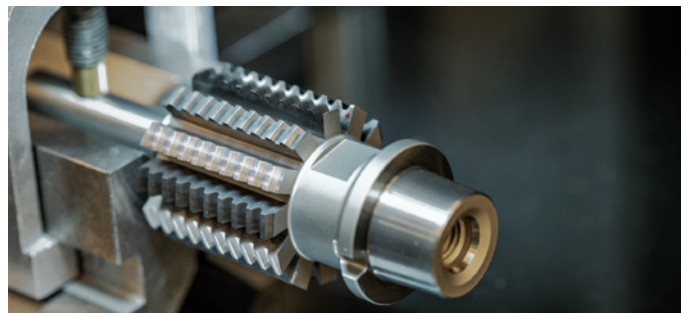
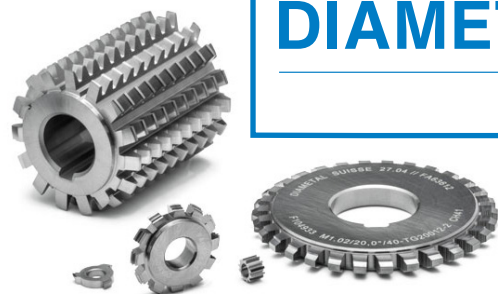
Providing Aerospace and Automotive OEM and sub tier customers unparalleled gear manufacturing service and satisfaction for decades.

We Deliver.

- Prototype & Development
- Production & Spares
- Detail Gearing & Assemblies
- Testing
- Outstanding Program Management
- Spiral Bevel Gears
- Curvic Couplings
- Spur & Helical Gears .5" (12mm) to 31.5" (800mm) Dia, 40" (1016mm) in Length
- 13 CNC Gear Grinders to 30" dia.
- 5 CNC Gear Shapers to 30" dia.
- 9 CNC Gear Hobbers to 20" dia.
- 10 CNC Electronic Gear Inspection Machines: Spiral Bevel, Helical & Spur.
- 17 CNC High Precision Mills. Vertical & Horizontal 3, 4, & 5 Axis to 70"
- 8 CMM Inspection Machines
- Gearbox Housing Machining to 70" (1778mm)
- 16 CNC Lathes to 30"
- CNC Jig Grinding
- Robotic Gear Cells
- 132,000 Sq Ft, state of the art, manufacturing space.
- Gear Quality to AGMA 15 - DIN 1
- ISO 17025 Certified Inspection Lab
- AS9100: 2009 Rev C. & ISO 9001:2008 Certified
- NADCAP: Temper Etch & Magnetic Particle Inspection

www.delta-gear.com
www.deltaresearch.com
www.deltainspection.co

DIAMETAL - BOOTH #3522



The DIAMETAL group unifies three main fields of expertise and high-precision industrial know-how that have been constantly evolving since 1936: abrasives, cutting tools and hard metal wear parts. The group provides the international market with standard or high-precision solutions personalized in all three areas. DIAMETAL delivers its production secrets (expertise, tools, methods, parameters) and even the first tools to its customers.

Gear Hobbing tools are one of Diametal's core competencies. From conception to production, our milling cutters are unmatched in these few points:

Logarithmic relief

All gear hobbing tools of DIAMETAL Swiss Cutting Tool are ground with a logarithmic undercut, guaranteeing the exact shape of the profile after each sharpening.

Sharpening the gear hobs

The lifetime of a hob depends largely on its sharpening process. The burr formation, deteriorating surface finish and a deformed profile are factors indicating that the tool needs to be reground. We offer a sharpening service for all types and sizes of hobs with the possibility of adapting or changing the cutting angle according to your needs.

Simulation

Deviations between the theoretical and actual tooth geometries are quickly calculated and detected when designing the micro gears. DIAMETAL "Virtual Gearing" simulation guarantees short cycle times and maximum process repeatability. We offer individual solutions. Every cutter design is simulated to virtually check the tooth profile created by the cutting process and thus guarantee the application.

Quality

To guarantee a long service life of its hobs, DIAMETAL uses the best carbide grades and the most suitable coatings for your applications. We can guarantee process repeatability and consistent profile machining. Our production, which complies with current quality standards, is continually adapted to meet your needs. A systematic check is carried out before each delivery and on request, our gear hobbing tools can be supplied with an inspection report.

For more information, visit <https://diametal.com>.

**DONTYNE SYSTEMS
LIMITED - BOOTH
#3019**



Dontyne Systems offers software and services aimed at the optimum design and manufacture of gear components. Our Gear Production Suite software has been developed as a collection of individual tools proven to deliver improved efficiency, cost savings, and quality control. We can also offer teaching courses and consultancy services. Dontyne has over 150 customers worldwide and various partners for applications ranging from automotive, marine, wind turbines, mining, and motor sport. The modular construction of the software has been designed for maximum flexibility. Our customers find the software useful both as a stand-alone system and as a powerful addition to

existing gear design systems. Bespoke integration of in-house IP to run alongside the recognized design and analysis is possible. Development of customer specific functionality embedded in machine tools and measuring equipment has provided a cost-effective solution to efficient product development and integration with our design software.

DOPPLER GEAR COMPANY - BOOTH #2726



Doppler Gear has over 50 years of experience in custom gear manufacturing. Our four manufacturing facilities in the upper Mid-West serve the component needs of domestic and international corporations. Large organizations rely on us to provide competitively priced parts with uncompromised quality. Small companies and individuals look to us to support their projects with technical expertise and thousands of stocked standard tools.

From one piece to continual production, Doppler Gear specializes in unground commercial gearing, splines, and broaching. We welcome the opportunity to review your requirements!

Contact: sales@dopplergear.com.

DTR CORPORATION - BOOTH # 2716



DTR is one of the leading manufacturers of gear cutting tools worldwide, serving customers in over 20 countries. We were established in 1976, under the name of Dragon Precision Tools Co., Ltd., which was changed to DTR in 2008. We offer a wide variety of hobs, shaper cutters, milling cutters, master gears and broaches according to the customer's demand. Also, we provide new design solutions per the customer's application. Right now, DTR is recognized worldwide for automobile transmission gear cutting tools which are also needed to produce the gears for all kind of industrial machines.

DUMBARTON TOOL - BOOTH #3023

Manufacturers of Quality Carbide Cutting Tools Since 1986

- Solid Carbide round tools, also in PCD and CBN tipped
- PCD and CBN tipped inserts standard and specials
- Coolant Fed Tooling
- Subland Drills
- Special Form Tools, Porting Tools
- "G" Drills, Straight Flute Drills, Spiral Flute Drills, Step Drills,
- End Mills, Spot Facers
- Reamers, Piloted Reamers, Step Reamers

DVS TECHNOLOGY AMERICA - BOOTH #2805 AND #2600

The DVS TECHNOLOGY GROUP is made up of Germany-based companies focusing on the turning, gear cutting, grinding and gear honing technologies. Besides engineering and manufacturing machine tools as well as grinding and honing tools, DVS operates two production sites where automotive parts are machined in series production exclusively on DVS machines. This adds a high degree of production know-how to the experience of the DVS machine tool and tooling manufacturers. With a unique combination of machining technologies, tooling innovation and production experience for the machining of vehicle powertrain components, DVS is one of the leading system suppliers in the industry. The DVS TECHNOLOGY GROUP has more than 1,300 employees worldwide. In key markets like the United States DVS supports its clients with their own staff in service and sales. Our US company DVS TECHNOLOGY AMERICA, Inc. is based in Plymouth, Michigan.

DYNAMIC MACHINE - BOOTH #3819

With over 200 years of combined machine tool and manufacturing experience, we are uniquely qualified to both sell and service CNC machinery from single, stand-alone units to complex, multi-machine turn-key systems.

ECM USA - HEAT TREAT BOOTH #1717



ECM USA provides innovative and low carbon emission furnace systems, advanced automation, services, and R&D testing in the Americas for the ECM Group. With experienced engineering and advanced manufacturing, our furnaces provide high up-time to demanding production environments all over the world. ECM's diverse systems are ideal for industrial and R&D/lab heat treating, including automotive (ask us about EV!), aerospace, crystal growth, photovoltaic, semiconductors, 3D additive & more. VISIT US AT BOOTH 1717

We strive to reach every customer's environmental and production requirements using the latest vacuum furnace technology. Ask us about testing your parts at our in-house Synergy Center.

SEE OUR AD ON p. 29

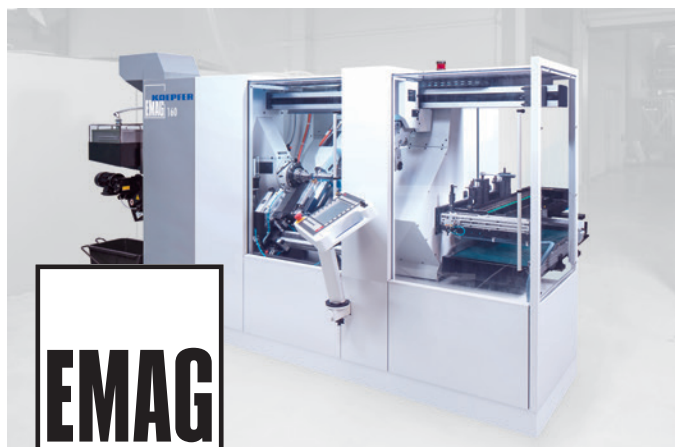
ELGETI ENGINEERING GMBH - BOOTH #2818

We are an independent engineering company with HQ in Germany and a branch in Indiana.

Our main services are:

- 3rd party failure analysis on gearboxes and transmissions
- Life testing of bearings and lubricants
- Design and production of test rigs for bearings, gearboxes and others

EMAG LLC - BOOTH #2813



TECHNOLOGY. CONNECTED.

EMAG offers an outstanding range of high-performance and flexible machines for producing gears, pinions, worms and shafts. Whether selecting a horizontal hobbing machine with an integrated chamfering unit or a vertical machine with skiving, milling or finish milling options, EMAG provides machine systems for nearly every industry.

On Display

EMAG Koepfer K 160 Self-Loading, Horizontal Hobbing Machine

- Versatile automation options
- Direct-driven, high-performance drives
- Numerous programmable axes
- Rigid base design for more precise gears
- Easy-to-program & operate

Additional Displays

- EMAG SU Gear Manufacturing Equipment
- Power Skiving
- Laser Welding & Cladding
- Electrochemical Machining (ECM)

SEE OUR AD ON P. 31

EMPIRE SOUTHWEST/PROJECT PHOENIX – BOOTH #3432

Empire Precision Machining is fully equipped to work on small to large components used in today’s top industries including mining, construction, and agriculture. Unlike other shops, all our work is done in-house, which means streamlined service and shorter downtime!

Flexible solutions, shorter lead times and quality work using state-of-the-art equipment – that’s the Empire difference, and you’ll see it in everything we do!

ENGINEERED ABRASIVES – BOOTH #2313

Engineered Abrasives® specializes in the finest automated blast finishing and shot peening equipment designed for your specific application. Since 1935, Engineered Abrasives® has offered a range of custom shot peening machines to meet the requirements of all industries, from automotive to aerospace and medical to heavy equipment. Gears, turbine blades, shafts, connecting rods, engine blocks, and many other parts across various industries are shot peened with Engineered Abrasives®-manufactured machines every day.

ERNST GROB AG – BOOTH #3010

ERNST GROB AG develops, designs and builds precision machines dedicated to the cold forming of splined and nonsplined workpieces. The manufacture of slotting machines for secondary and finishing operations on cold formed workpieces is yet another core competence of the company.

- Cold forming machines for sheet metal and solid components
- Slotting machines for sheet metal components



- Special purpose machinery manufacture
- Subcontracting
- Development and Engineering

ERNST GROB AG
Rohrgasse 9 / P.O. Box 830
8708 Maennedorf
Switzerland
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Contact: Steven Bruppacher, Sales Manager
Phone: +41 (0)44 / 922 77 00
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Email: info@ernst-grob.com

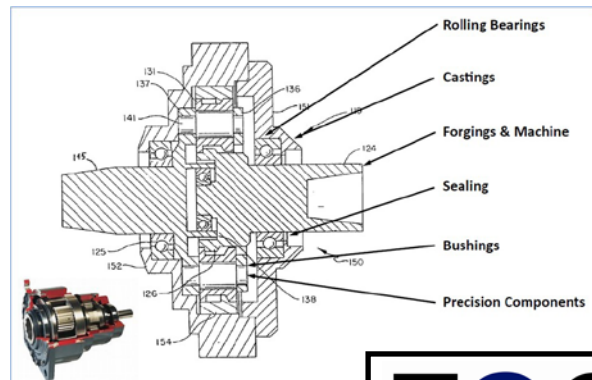
SEE OUR AD ON p. 1

ERWIN JUNKER MACHINERY INC. – BOOTH #3632

Your partner for precision.

The specialists at JUNKER and ZEMA develop and produce concepts and solutions for single or complete machining operations, from a single clamping process to complex production lines. All workpiece geometries and sizes can be ground on JUNKER Group grinding machines. The well-known variety of our standard machines is complemented by intelligent, customized solutions and versatile equipment options. As a complete supplier, the JUNKER Group supplies interlinked automation tools, application-based software developments, and the latest digital solutions.

THE ESTELL GROUP LLC – BOOTH #2422



ENGINEERED COMPONENTS – DELIVERING VALUE

The Estell Group supports power transmission OEMs with world-class suppliers of bearings, engineered castings, forgings, and precision machined components. Let us support your design and manufacturing teams with:

- Internationally competitive bearings, domestically stocked.
- Fully machined, ready-to-hob bronze gear blanks from 25 to 500 mm center distances.
- Machined & as-cast gray/ductile iron, ADI, steel, and stainless steel castings from ounces to 10,000+ lb.
- Machined & as-cast aluminum alloy castings (gravity permanent mold, sand, and high-pressure die cast).
- Machined forgings, shafts, enclosures, adaptors, and housings.
- Fabrications, stampings, & assembly.



EURO-TECH CORP. - BOOTH #3216



Euro-Tech has provided high-end, custom solutions for demanding gear industry applications since 1993. We are the exclusive North American supplier of the Frenco and Mytec Hydraclamp product lines. Frenco is a globally recognized specialist in gear and spline metrology. Their INO spline gages provide a quick method of inspecting splines to ensure interchangeability of parts even between different manufacturers. Mytec Hydraclamp is the pioneer of seal-less hydraulic expansion technology. Their product line features hydraulic and mechanical arbors and chucks for balancing, grinding, inspection and gear production. Ask how we can help with your special application challenges.

EVER SHARP TOOLS - BOOTH #3805



Ever Sharp Tools provides VALUE by leveraging the resources of one of the world's largest manufacturers of custom gear cutting tools and spline gauges. EST-US is the exclusive Sales and Service Center in North America for custom products manufactured by EST Tools Co. Ltd. We are spline experts providing engineered, custom, precision, gear tools and gauging solutions. We supply custom master gears, spline gages, Go/No-Go gages, spline measuring devices, broach tools, skives, hobs, shapers, spline racks & dies, thread racks & dies, spline

milling cutters, as well as custom mills and drills. EST provides complete spline solutions in a vertically integrated one-stop shop. EST can supply to meet the following spline standards; AGMA & ANSI (USA), DIN (Germany), JIS (Japan), and ISO (International). Please visit EST booth 3805 for cost-saving resolutions to your specific requirements.

FABRICATING & METALWORKING MAGAZINE - BOOTH #3707



Fabricating and Metalworking provides rich technical content and targeted advertising through print, online, video and other multimedia outlets. We serve a diverse audience of small-to-large size job shops, contract manufacturers, metal service centers, OEMs, and higher volume metal manufacturers who compete in markets ranging from aerospace, automotive, medical, energy, construction, mining, off-highway, and many more...stop by our booth and sign up for a free subscription.

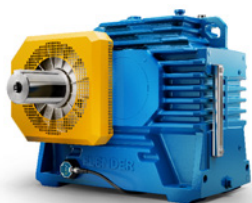
FANUC AMERICA CORPORATION - BOOTH #3116



As the leading supplier of robots, CNCs and factory automation, FANUC is committed to helping companies find solutions. From small shops to large assembly operations, manufacturers rely on FANUC automation to help improve productivity, increase quality, maximize profits and maintain a competitive edge. We also work with schools and industry to develop certified curriculums centered on robotics and automation training, helping prepare students for high-tech careers in advanced manufacturing. In addition, we are dedicated to "Service First," which offers our customers parts and support for the life of their FANUC products.

FLENDER CORPORATION – BOOTH #3022

FLENDER



Why Flender? Flender Corporation is a leading global supplier of mechanical drive systems and has earned a reputation for the highest performance, innovation, quality, and reliability of mechanical components.

Flender offers a wide variety of gear units, couplings, and associated services focusing on critical industries such as wind power, cement, mining, iron/steel, power generation, and conveyor technology. Flender products and services combine the latest technology with extremely high quality and have been reliably providing the optimal transmission of power for more than 120 years.

Our vision consists of working closely with all our stakeholders, jointly shaping a sustainable future, and achieving optimum customer value. Visit with us at booth 3022 and see why Flender can be your Partner of Choice for a Sustainable Future.

SEE OUR AD ON P. 9

FOC CISCATO – BOOTH #3124

FOC



FOC Ciscato Spa is the reliable partner for forged gear wheels and pinions.

Founded in 1879, it has a long experience in the production of closed die and open die forgings in carbon steel, low alloy steel, high strength steel, stainless steel, duplex, super duplex and nickel alloys.

MPT EXPO EXHIBITOR LISTINGS

Pieces can be open die forged up to 40 tons and closed die forged starting from 50 kg up to 2.5 tons. Those pieces are delivered to a variety of industries including power generation, railway and lifting equipment. Our expertise and high quality manufacturing means FOC Ciscato is known worldwide.

FOERSTER INSTRUMENTS – BOOTH #2322

FOERSTER—NDT Solutions for testing of Metal Components
FOERSTER, a leading manufacturer of nondestructive testing (NDT) equipment provides Eddy Current technology to detect material discontinuity and imperfections such as cracks, laminations, pores etc. It also enables metal manufacturers to check for material mix-ups and heat treat conditions.

The products range from sophisticated integrated in-line Material Handling Test Systems to handheld testing instrumentation for the Automotive Component, Aerospace, and Metal Manufacturing Industry.

www.foerstergroup.com

FOREST CITY GEAR COMPANY – BOOTH #2809



Since our founding in 1955, we have strived for excellence without exception. It's why our fine-pitch and medium-pitch custom gears are trusted worldwide, in everything from telescopes to tractors, artificial elbows to aircraft, military lasers to medical examining tables, printers to race cars, power tools to dental drills. They are even found on the International Space Station and the Mars Rovers. Whether you are looking to source one-of-a-kind precision gears or high-volume production, we invite you to learn why the world turns to Forest City Gear.

SEE OUR AD ON P. 5

FORGING INDUSTRY ASSOCIATION – BOOTH #3326

The Forging Industry Association (FIA) comprises more than 200 North American metal forging producers, suppliers, and service providers. Its members account for more than 75 percent of custom forging volume produced annually in North America. FIA, along with its predecessor organizations, has served the forging industry since 1913. FIA's website features a convenient RFQ system popular with OEMs, Tier I & II suppliers, and others looking for a source of quality metal forgings.

FORST TECHNOLOGY AMERICAS LLC – BOOTH #2828 AND #2928



Forst is a global technology leader in the design and manufacturing of broaching machines and associated tools, i.e. to produce ring gears in automatic transmissions and disks for jet engines or power generation turbines. All major automobile and disk manufacturers and their Tier-1 suppliers are among the customers Forst has established world-wide over the past 100 years.

Forst Technology Americas, LLC
870 N Miramar Ave 413
Indialantic, FL 32903
Phone: +1 (321) 285-3178
fta@forst-online.de

FVA GMBH – BOOTH #2518



FVA-Workbench: Leading transmission design software makes the latest drive technology research easy to apply – User-friendly, efficient, reliable.

As a joint venture of the world's largest Research Association for Drive Technology and the Machinery and Equipment Manufacturers Association, FVA works hand-in-hand with top-level German research institutions and leading companies from the drive technology industry.

FVA-Workbench is a manufacturer-neutral software solution for the modeling, parameterization, and calculation of transmission systems. It bundles 50 years of research and development from the FVA expert network into a single plat-

form and makes this accumulated knowledge directly available for practical application.

For more information, visit fva-service.de/en.

GALDABINI SPA – BOOTH #3614

Galdabini manufactures precision straightening machines, material testing machines and hydraulic presses. The company is composed of two corporate headquarters located in Italy and Switzerland. Galdabini provides state of the art technology, crafted with the highest quality, by the most knowledgeable engineers in the industry.

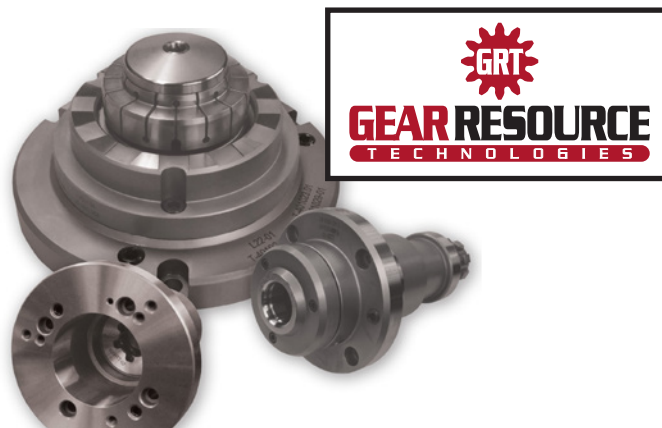
GEAR MOTIONS INC. – BOOTH #2619



Gear Motions is a leading gear manufacturer specializing in supplying custom cut and ground gears for OEMs all around the world. Whether we're manufacturing your gear complete from start to finish or working from your blanks, our wide range of precision gear manufacturing capabilities and services deliver quality gears to meet almost any application – and the most demanding specifications.

The Gear Motions network is capable of manufacturing all types of custom gears – cut or precision ground. With products including precision ground helical gears, spur gears, pump gears, bevel gears and worm gears, as well as multiple types of sprockets, timing pulleys, shafts and splines, there isn't a project we can't handle. We are the gear manufacturer that will focus on you and your project and deliver quality gears in a timely manner.

GEAR RESOURCE TECHNOLOGIES, INC. – BOOTH #2906



CYLINDRICAL AND BEVEL ARBORS – BEST QUALITY – MADE IN USA

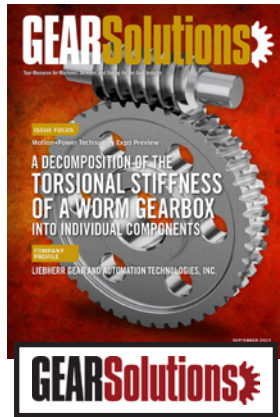
Gear Resource Technologies (GRT) has focused upon the precision workholding and tool mounting needs of gear manufacturers, since 1997. We provide a highly responsive engineering and manufacturing resource, for the many specific needs of the industry. We serve over 100 North American and overseas businesses, large and small, as well as providing runoff tooling to several well-known gear machine OEMs. Our engineers assemble and test all our work at our Rochester, NY manufacturing facility. We often model work before quoting, for customer review and comment.

GEAR SOLUTIONS MAGAZINE – BOOTH #3026

Gear Solutions magazine offers its readers the latest, most valuable content on the multi-faceted gear-manufacturing industry, as well as critical thoughts on what this information means for the future. The magazine publishes 12 times a year in print and digital formats.

In each issue:

- In-depth editorial contributions on the gear-production process from industry experts.
- Comprehensive discussions on raw materials, design, costs, heat treating, quality control, workflow, and more.
- Updates and news from the gear-manufacturing community.
- Interviews with industry insiders.



GEAR TECHNOLOGY MAGAZINE – BOOTH #3132 AND #3136



Gear Technology, the Journal of Gear Manufacturing, is the flagship publication of the American Gear Manufacturers Association. Published since 1984, Gear Technology is also known as "The Gear Industry's Information Source." Every issue includes articles on gear design and gear manufacturing,

along with regular coverage of topics like grinding, inspection, heat treating and more.

Gear Technology and Power Transmission Engineering are proud to offer four panel discussions on the ASK THE EXPERT stage (booth #3136). We've lined up a number of high-profile experts for discussions on gear industry topics moderated by our editors.

The four discussion panels include:

The Future of Gear Manufacturing, Tuesday, October 17, 10:30 a.m., featuring:

- Joel D. Neidig, Director of R&D, ITAMCO
- John Perrotti, Chairman and CEO, Gleason Corporation
- Prof. Dr.-Ing. Karsten Stahl, head of the Institute for Machine Elements and Director of the Gear Research Center (FZG) at the Technical University of Munich
- Carlos Wink, Chief Engineer, Eaton Mobility Group

Manufacturing of Gears for Electric Vehicles, Tuesday, October 17, 2:30 p.m., sponsored by Reishauer, featuring:

- Pascal Diggelmann, Head of Application Technology, Reishauer
- Dr. Hermann J. Stadtfeld, Vice President Bevel Gear Technology, Gleason
- Dr. Oliver Winkel, Head of Application Technology, Liebherr



Automation for Job Shops, Wednesday, October 18, 10:30 a.m., sponsored by Schafer Industries, featuring:

- Rob Cherba, Automation Sales Manager, Liebherr Automation
- Geoff Dawson, Director of Michigan Regional Sales, FANUC America
- Ryan Finfrock, Engineering Manager, Schafer Industries
- Gerd Walter, COO, Creative Automation



Solving the Skilled Workforce Challenge, Wednesday, October 18, 2:30 p.m., sponsored by Forest City Gear, featuring:

- Kika Young, President, Forest City Gear
- Mary Ellen Doran, Executive Director, AGMA Foundation
- Kris Ward, Sr. Director, Strategy & Business Development, SME
- Megan Schrauben, Executive Director, MiSTEM Network



In addition, our editors will be conducting live interviews on our stage throughout the show. Stop by and learn what some of the other exhibitors have to say!

Also, the AGMA Media Expert stage will be home to MPT Expo's Solutions Center presentations:

- Sinto America, Tuesday, October 17, 12:30 p.m.
- Helios Gear Products, Tuesday, October 17, 4:00 p.m.
- EMAG, Wednesday, October 18, 12:30 p.m.
- Nichiei, Wednesday, October 18, 1:00 p.m.
- Schaeffler Digital Solutions, Wednesday, October 18, 1:30 p.m.
- Gleason Metrology Systems, Wednesday, October 18, 2:00 p.m.



GIBBS MACHINERY COMPANY – BOOTH #3107

Gibbs Machinery Company, Inc. is a traditional machine tool dealer based in Warren, MI USA. Competent in various types of metalworking machinery, we have served industrial markets across the world since 1946 while maintaining a strong domestic presence. We specialize in Gear & Production Machinery, Gear Accessories & Tooling, CNC Machining, Turning, and Grinding.

We offer a full suite of industrial solutions to our customers including machine sales from inventory, certified appraisals, auctions, liquidations, brokerage & commission sales, private treaty sales, machine reconditioning and warehousing. Come visit our Warren, MI facility and view any of the hundreds of gear machines we have in stock.

- CNC Cylindrical Grinding Solutions from MAR srl. Customizable OD/ID Cylindrical Grinding machines ranging from Universal, low-volume/high-mix to Production systems suitable for mass production. MAR machines are suitable for all internal, external, radius, non-round as well as eccentric grinding.
- Horizontal & Vertical Hard Turning Machines from Rasoma
- Horizontal & Vertical Hobbing Solutions from Seiwa G-Tec
- Laser Welding Machines made by ARNOLD Ravensburg
- Laser Cutting Machines from Stiefelmayer
- Multi-Spindle Horizontal Machining Centers made by SAMAG
- The “super-clean” Industrial Washing Systems from BvL

www.gmtamerica.com

GLEASON CORPORATION – BOOTH #2308



Welcome to Gleason - The Total Gear Solutions Provider.

Gleason offers its customers “Total Gear Solutions”. Gleason is a leader in the development, manufacture and sale of gear production machinery, related equipment, automation solutions, plastic gears and design software for gears and power transmission systems. The Company’s products are used by customers in automotive, truck, aircraft, agriculture, mining, energy, construction, power tool and marine industries and by a diverse set of customers serving various industrial equipment markets. Gleason has manufacturing operations in the United States, Brazil, Germany, Switzerland, India, China and Japan, and has sales and service offices throughout North and South America, Europe and in the Asia-Pacific region.

More information about Gleason Corporation is available at www.gleason.com.

SEE OUR AD ON THE BACK COVER

GMTA – GERMAN MACHINE TOOLS OF AMERICA – BOOTH #3217



GMTA is Your SINGLE SOURCE FOR:

- The ONE-AND-ONLY Scudding® (Skiving) Machine from PROFILATOR GmbH. See our separate listing under Profilator for more information about the brand-new 300-V modular gear machining center.

GREAT TAIWAN GEAR LTD. – BOOTH #2617



Welcome to Great Taiwan Gear, a leader in gear supply.



Great Taiwan Gear has an experienced team and modern equipment capable of handling orders for prototype gears or orders for thousands of pieces. Great Taiwan Gear specializes in the production of gears and gear related parts.

We produce gears for automotive, high precision gears, gear pumps, and other power transmissions. We also provide Aerospace Gear, EV gears and gearboxes. Listed below are just a few of the many items we offer.

- Aerospace/Medical treatment
- High-precision gear
- Gears and shafts
- EV transmission system gear set
- Automated integrated production

GWJ TECHNOLOGY GMBH – BOOTH #3127

**Leading software solutions
for Gears and complete
Gearboxes**



design • optimization • manufacturing • made in Germany

Focusing on mechanical engineering, GWJ Technology stands for high-quality products and professional software development for mechanical engineering to support engineers, designers and technicians in their daily work. The product range of innovative calculation software is wide and scalable:

to our booth is where we will showcase our cutting-edge gear workholding mandrels and solutions that promise to transform the way you approach workholding challenges.

Unparalleled Precision

At HAINBUCH, precision is our hallmark. Our gear workholding mandrels are meticulously engineered to deliver unmatched accuracy and consistency, ensuring that every workpiece is held securely and in perfect alignment. Whether you're dealing with small, intricate components or large, heavy-duty parts, our mandrels are designed to meet your exacting standards.

Efficiency Redefined

Time is money, and our solutions are tailored to maximize efficiency in your machining processes. With quick-change capabilities, our mandrels enable rapid setup changes, minimizing downtime and boosting production throughput. Say goodbye to cumbersome setups and hello to seamless transitions between workpieces.

Versatility at Its Best

No two machining jobs are the same, which is why our gear workholding solutions are designed for versatility. From cylindrical to irregularly shaped workpieces, our mandrels adapt effortlessly to your needs. They are suitable for a wide range of applications, making them an indispensable tool in your manufacturing arsenal.

Reliability You Can Trust

When it comes to machining, reliability is paramount. HAINBUCH's gear workholding mandrels are built to withstand the rigors of high-speed machining while maintaining a secure grip on your workpieces. Rest easy, knowing that your production process is in safe hands.

Custom Engineered Solutions

We understand that one size does not fit all in the world of machining, which is why HAINBUCH takes pride in offering custom-engineered solutions tailored to your specific needs. Our team of experts collaborates closely with you to understand your unique challenges and requirements, designing custom workholding solutions that address even the most intricate machining challenges. Whether you're dealing with non-standard workpiece geometries, specialized materials, or unconventional applications, HAINBUCH has the expertise to create a solution that maximizes your efficiency and accuracy. At the MPT Expo, explore how our custom-engineered solutions can be the key to overcoming your most complex workholding challenges, giving you a competitive edge in the industry.

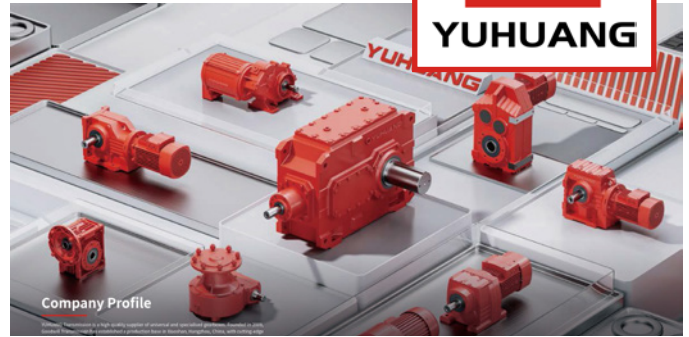
Stay Ahead of the Competition

In the ever-evolving manufacturing landscape, staying competitive is crucial. HAINBUCH's gear workholding mandrels and solutions empower you to stay at the forefront of technological advancements, enabling you to take on complex projects with confidence.

We look forward to meeting you and discussing how HAINBUCH can elevate your machining capabilities to the next level. See you soon!

**SEE OUR ARTICLE ON P. 6
SEE OUR AD ON THE INSIDE
BACK COVER**

**HANGZHOU YUHUANG
TRANSMISSION EQUIPMENT CO.,
LTD. - BOOTH #2436**



Yuhuang Transmission is a high-quality supplier of general-purpose and special-purpose reducers. Yuhuang Transmission was founded in 2009, established a production base in Xiaoshan, Hangzhou, inheriting domestic cutting-edge technology, mainly producing general-purpose and special-purpose reducers.

Now the company has 45,000 square meters of standardized workshop, more than 100 technical staff, more than 300 sets of production equipment, has a complete manufacturing chain, but also has strong technology and manufacturing background in the field of gear manufacturing.

HELIOS GEAR PRODUCTS - BOOTH #3609



Pairing Proven Gear Hobbing Solutions with Comprehensive Automation

Helios is demonstrating world-class hobbing solutions including the proven Hera 350 CNC gear hobbing machine and the MSR rotary magazine with automatic loading.

With globally competitive pricing, proven domestic support, and a unique combination of technical capabilities in a small footprint, the Hera machines offer both job shops and end-product gear manufacturers world-class hobbing solutions. Advancing productivity even further is the new MSR, a rotary magazine with automatic loading that supports versatile automation by integrating operations such as gear generation, washing, deburring, and laser marking.

Visit booth #3609 for machine, cutting tool, abrasive tool, and automation solutions for gear manufacturing.

HEXAGON/ROMAX TECHNOLOGY – BOOTH #2817

Hexagon is a global leader in sensor, software, and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Romax, part of Hexagon's Manufacturing Intelligence division, provides world-leading solutions for the design, analysis, testing and manufacture of gearboxes, drivetrains and bearings. Learn more at romaxtech.com.

Hexagon's Manufacturing Intelligence division provides solutions that utilize data from design and engineering, production and metrology to make manufacturing smarter. Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.9 billion EUR.

Learn more at hexagon.com and follow us @HexagonAB.

HOBSOURCE INC. – BOOTH #2905



Custom cutting tools for cylindrical and bevel gears

Whether you hob, shape, skive, shave, broach or mill, HobSource delivers the quality tools and personal service you expect. Each and every tool is manufactured to exacting quality standards in ISO/QS facilities from the latest grades of high-speed steels and carbides using CAD/CAM technology and state-of-the-art CNC equipment. If you demand performance, reliability and dependability from your tools and vendors, we challenge you to stop our booth for more information. Your bottom line will be glad you did.

MPT EXPO EXHIBITOR LISTINGS

HOFFMANN FILTER CORPORATION – BOOTH #2613

Hoffmann Filter Corporation manufactures a wide line of coolant filtration products, including our popular vacuum and suction band filters. We also offer a wide line of accessories to further customize your filter system to meet your exact needs. Visit our website at www.hoffmannfilter.com to learn more about how we can serve you as "your partner in filtration."

HOMMEL-ETAMIC – BOOTH #3803



As a leading manufacturer of metrology systems, HOMMEL-ETAMIC offers a broad portfolio of measurement solutions for industrial manufacturing processes. Our technologies include pneumatic measurement, tactile or optical measurement of roughness, contour, form and dimensional features, as well as optical inspection of machined surfaces.

HOMMEL-ETAMIC offers both standard and custom metrology solutions that are flexible and versatile for production in automotive, aerospace, medical technology and other precision manufacturing industries. Our custom systems are individually designed to precisely meet the customer's part specification requirements, degree of automation and process location to ensure the quality of the workpiece throughout the entire production process.

HORN USA, INC. – BOOTH #3322



HORN is represented in 70 countries on all continents, and companies in the automotive, chemical, aerospace, medical and tool and mold making industries manufacture using precision tools from HORN. Our core competences are based on four pillars: Our own research and development department, our own coating technology, our own carbide production, and our own manufacturing technologies.

HORN prides itself on quality precision tools that are used for demanding machining operations, a product range of 25,000+ standard tools and 150,000+ special solutions, and our field service team that provide a complete customized solution from the initial part drawing to getting the tool in the machine.

Our corporate philosophy places people at its core – emphasizing the utmost importance of customer and employee satisfaction, as well as our responsibility towards the environment.

Horn USA Inc is an ISO9001 and ISO14000 certified company.

HYDRA-LOCK CORPORATION – BOOTH #2519



Hydra-Lock Corporation designs and builds precision work and tool holding devices. Our technology leads the industry with more than 90 patents globally.

We produce three styles of arbors and chucks, consisting of solid steel sleeve, split steel sleeve and our Conform-A products. All of our designs are application specific.

Our product offering includes high precision, high expansion and high repeatability.

We use our designs to hold a single part, a family of parts or multiple parts on a fixture with the highest accuracy in the industry.

We also repair competitor products.

“If you can machine it” Hydra-Lock can hold it!

- Over 70 years in business
- Supporting the aerospace, defense, automotive and medical device industries
- We specialize in holding thin-walled parts
- Our accuracy & repeatability is second to none

HYMARK INTERNATIONAL – BOOTH #2434

Hymark International Inc., founded in Montreal Canada in 2005, specializes in sourcing high quality hydraulic system components, OEM metal alloy casting & die casting, machining, and plastic injection molded parts at very competitive prices.

What Our Team Can Do For You?

- Single point of contact to consolidate all sourced products from Taiwan
- Access to wide variety of ISO certified

manufacturing capabilities

- Access to highly experienced manufacturers and engineers
- Dedicated quality assurance team to ensure products meet specifications before leaving the factory
- North American based product support

Bring your projects to market quickly at Booth 2434!

IMT FORGE – BOOTH #2419

Clifford-Jacobs, an IMT Company.

Clifford-Jacobs is a leader in high-quality short-to-medium custom forging runs. Our forgings are produced from Timken® quality steels. Clifford-Jacobs’ expert staff and CNC equipped die shop ensures quality workmanship on even the most complex designs. We are centrally located between Chicago, St. Louis, and Indianapolis—providing us access to three of the nation’s largest shipping hubs so we can deliver your orders on-time. In fact, Clifford-Jacobs is routinely recognized as a #1 quality supplier for manufacturers of off-highway, mining, forestry, oilfield, rail, and aerospace products.

Call us today, 217.352.5172.

INDEX TECHNOLOGIES INC. – BOOTH #3804



Index Technologies Inc. was formed in 1999 to service gear manufacturers’ hob sharpening needs. Since our humble beginning with one hob sharpener we have added seven hob sharpeners, four shaper sharpeners, conventional, skiving and a CNC inspection machine, enabling us to have the most rapid turnaround time in the industry: edge prepared, coat-

ed and ready for your gear cutting machine. We routinely surpass the specified quality tolerance of the tools we sharpen, and we guarantee our workmanship. Our customers' investment in gear tools is significant. We help our customers maintain that investment to meet or surpass your specified AGMA or DIN tolerance every time we sharpen a tool. We have sharpened thousands of hobs and shaper cutters in the last 20 years, so let our experience be to your advantage.

INDUSTRIAL MACHINERY DIGEST – BOOTH #2432

Industrial Machinery Digest: IMD

The extensive industrial machinery resource for manufacturing. Covering solution-based articles, new products, emerging market trends, automation solutions, white papers, profiles across the diversified manufacturing segments of job shops, machine shops fabricating shops, production line manufacturing plants, large industrial facilities including services for retrofit, rebuilding, machine maintenance. IMD has served U.S. Manufacturing for 31 years.

Visit: <https://IndustrialMachineryDigest.com>

INTRA CORPORATION – BOOTH #3713

Founded in 1979, Intra has become an international industry leader in specialized manufacturing and precision measurement industrial products. With operations throughout the world, our talented staff, many of whom have specialized engineering expertise, contribute daily to our success and leadership in our industries.

IPM, INC. – BOOTH #3122

Please visit our booth to discuss your custom gearing needs.



IPM is an AS9100 - ISO 9001:2015 contract manufacturing business specializing in the production of a wide variety of precision machined components. Located in Waite Park, MN, IPM specializes in turning, milling, gear cutting, grinding and assembly work, utilizing some of the most up-to-date CNC equipment available. IPM has been in business since 1992 and currently employs about 45 highly skilled machining technicians and operates out of a modern 32,000 sq.

MPT EXPO EXHIBITOR LISTINGS

ft. facility. The industries IPM serves are aerospace, defense, off-highway, construction equipment, high performance automotive, agriculture, fluid power as well as others.

The latest service added to IPM's manufacturing offerings is gear grinding. A Kapp ZE500 as well as a Gleason 245TWG have recently been added to the machine lineup, enabling IPM to offer extremely high-quality gear components to its customers.

JAINEX AAMCOL LTD. – BOOTH #3117



SCAN TO DOWNLOAD THE BROCHURE



Jainex Aamcol is a Leading manufacturer of high-quality gear cutting tools and spline gauges. The Aamcol plant in Aurangabad, India was built in Collaboration with Klingelberg Germany and inaugurated by Late Mr. Diether Klingelberg. The Company is led by a team of technocrats and has highly skilled design engineers to cater to the varied needs of its customers. Products are made to very high accuracy as per global standards. The company's specialty is worm wheel hobs with high helix angles. Our dedication to excellence has earned us worldwide recognition. The company's products are exported globally.

www.jainexaamcol.com

KAPP TECHNOLOGIES L.P. – BOOTH #3200

KAPP NILES is a globally operating group of companies with high-quality and economical solutions for finishing gears and profiles. About 1,000 employees represent the innovative strength and expertise of the sustainably managed family company, which has grown for over 125 years.



With production sites in Germany as well as worldwide sales and service branches, we are responsive and reliable in all major markets. KAPP NILES is partner for companies from numerous industrial sectors in the mobility, automation and energy segments.

The perfect interaction between machine, tool and technology enables the precise machining to a thousandth millimetre and up to a diameter of eight metres. Each system solution is individually optimized for customer requirements and serviced by us throughout its life cycle. Highly accurate measuring equipment complements the comprehensive product range to ensure the required quality.

KAPP NILES supports efficient and stable processes with innovative services and digital solutions.

SEE OUR ARTICLE ON P. 8

KLINGELBERG AMERICA – BOOTH #3426

WELCOME TO KLINGELBERG

The Klingelberg group is a world leader in the development, manufacture and sale of machines for bevel gear and cylindrical gear production, measuring centers for gearing and axially symmetrical components as well as customized high-precision gear components. The company's products are used by customers in automotive, truck, aircraft, agriculture, construction, power tool and marine industries and by a diverse set of customers serving various industrial equipment markets.

The activities of the Klingelberg-Group, whose origins date from 1863, is managed today, in the seventh generation, by Jan Klingelberg.

KUGLER BIMETAL SA – BOOTH #2736

Kugler BIMETAL has constructed a powerful know-how in tribology with more than 70 years in the field of anti-friction.

The Bimetal solutions combine a bronze coating on a steel substrate, attending to higher tribological and mechanical performance, purely functional design and outstanding power density.

Since 1950 Kugler BIMETAL SA has manufactured, exclusively, parts in steel/Kugler-TOKAT bronze, intended to solve problems of friction. These parts have been developed to meet the most demanding applications where extreme operating conditions are encountered: severe mechanical stresses, high speeds, high accuracy and high temperatures.

KUPRAL S.P.A. – BOOTH #2423



Gravity Die Cast Aluminum & Bronze

Global Reach • Local Support • Constant Innovation

Precision Machining

Chill-cast non-ferrous alloy foundry & machine shop established in 1976 in the Brescia area of Northern Italy, serving EU & N. American markets (automotive, industrial, energy, automation).

Reliability, quality and value are assured in highly automated casting production of copper (tin, aluminum, manganese bronzes & brass) and aluminum alloys. Fully machined components meet your most demanding requirements with 3-, 4-, & 5-axis CNC machining capabilities.

Kupral is well positioned to meet your current and future growth demands. Our engineering, manufacturing, and management expertise supports your team through concept, design validation, value analysis and production, assuring lowest total cost solutions.

LAKE SHORE MACHINERY SALES – BOOTH #3826



Precision Gear Machining Excellence: The Ultimate Solution

Unveil the true potential of gear machining with cutting-edge techniques: hobbing, power skiving, and Invo-Milling™. These methods, seamlessly integrated through the EUKLID software and Weingartner's weinCAD Gear Designer, redefine precision and efficiency in gear manufacturing. Elevate your production with the ideal companion: Weingartner's mpmc range of machines.

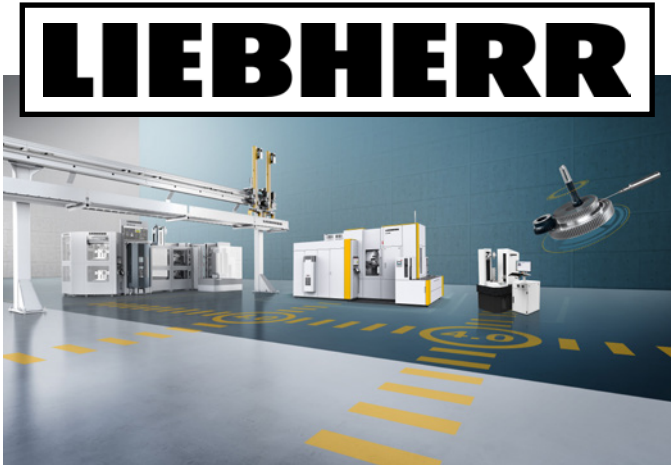
LEISTRITZ ADVANCED TECHNOLOGIES CORPORATION – BOOTH #3816



Leistritz Production Technology proudly delivers a comprehensive range of cutting-edge machinery and high-precision components, meticulously designed to address the

unique demands of the automotive, aerospace, energy, and medical industries. Our commitment to innovation and unwavering dedication to quality have solidified our reputation as the industry benchmark. Our precision products play a pivotal role in transforming manufacturing operations by optimizing production processes, significantly reducing downtime, increasing efficiency, and reducing costs. With a rich history of pioneering solutions, Leistriz offers custom machinery solutions that empower businesses to achieve levels of productivity and precision that set them apart in their respective fields. Leistriz is more than a supplier, we are your partner in metalwork precision success.

LIEBHERR GEAR AND AUTOMATION TECHNOLOGIES – BOOTH #2800



Liebherr Gear and Automation Technologies, Inc. offers a complete program of gear technology and automation solutions. Our machines include gear hobbing, shaping, skiving, chamfering, and gear grinding machines, as well as gear metrology solutions. These machines feature the LHGearTec control system, an intuitive interface that streamlines machine operation and efficiency. In addition, Liebherr manufactures gear cutting tools and clamping fixtures, to provide full turn-key gear machining. Liebherr automation systems offer a wide range of solutions that are cost-effective, user-friendly, high-quality, and offer the flexibility to expand retrospectively. At the MPT Expo, Liebherr will be introducing the all-new LC 400 M gear hobbing machine, for use in a wide variety of applications. With box-guideways designed for maximum stiffness, this machine is rated for module 8 mm hobbing, and coupled with quick-change fixturing, the machine is extremely versatile for job shops. Liebherr will also present the WGT 400 gear inspection machine, similarly flexible for a variety of gear applications, and best in class accuracy, from e-mobility to industrial gearboxes. Please visit us at Booth 2800.

MACHINE TOOL BUILDERS INC. – BOOTH #3206

MTB Introduces Revolutionary New Gear Hobbing Machines at M+PT Expo

Machine Tool Builders will unveil, for the first time in North America, the new HAMA N70 Horizontal Hobbing Machine,

MPT EXPO EXHIBITOR LISTINGS

and SMG's SH410 Vertical Hobbing Machine, both delivering long-sought performance and exceptional value.

Machine Tool Builders Inc., with its fast-expanding lines of world-class new gear production machines, combined with its renowned rebuild/recontrol services for older machines, now offers gear producers the optimum solutions for the widest range of applications. Examples of these many technologies will be on display at the MTB exhibit at M+PT Expo, Booth #3206. Visitors will have the opportunity to experience the many benefits of these new solutions, including:

- The HAMA N70, which takes CNC horizontal hobbing to 'the Nth Degree.' The N70 is the latest in the HAMA series, a highly respected Japanese global brand with thousands of installations worldwide. With the N70, HAMA has made a quantum leap forward for more economical, more dependable production of high precision aerospace and automotive gears up to 70 mm in diameter, and shaft lengths to 250 mm. The N70 has been completely re-designed to pack more power and precision into a very compact package, with extreme rigidity and the capacity for gears up to Module 2.5. Most importantly, it's available fully automated to reduce non-productive load/unload time to just three seconds. Equipped with the latest FANUC controls, touchscreen and HAMA's operator-friendly programming, the N70 is also exceptionally easy for even less experienced operators to run day in, day out.



- The SMG SH410 Vertical Hobbing Machine, for parts as large as 410 mm in diameter, and workpieces to Module 8. It's an exceptional solution to meet the day-to-day demands and flexibility requirements of today's gear jobbers. The machine combines high hobbing and table speeds and rapid X- and Z-axis travel, with the high rigidity, high torque, high precision worktable and powerful work spindle to cut cycle times while delivering high precision gear cutting even at high cutting loads. This productivity is coupled with a variety of options with the gear jobber in mind: various automation configurations; on-board chamfering/deburring; provisions for extra-long shafts to 650 mm; even hard skiving. It's compact, highly rigid, ideal for both wet or dry hobbing, and available with FANUC or Siemens CNC with easy, user-friendly dialogue programming.



- MTB's comprehensive new recontrol/retrofit package for larger-capacity profile grinding gear machines with outdated controls, adding highly desirable performance at a fraction of the cost for new machinery.

The package is built on state-of-the-art Fanuc or Siemens CNC platforms and includes MTB's user-friendly Human Machine Interface (HMI) with Profile and Worm Conversational Software designed to simplify the operator's programming, setup and operational tasks, and help reduce costly non-productive time as well as the risk of operator error.

In addition, the MTB package includes provisions for advanced, fast and flexible on-board wheel dressing, as well as optional on-board inspection featuring the latest Mapposs or Renishaw 3D scanning probe technology (depending upon the machine, control choice and application). The package includes all required mechanical and electrical components – standardized, up-to-date and easily replaceable to help avoid early obsolescence.

"With the rate of today's controls obsolescence increasing and the longevity of the physical machine tools today, upgrading your controls platform becomes important to remain competitive," says MTB's Ken Flowers. "This new recontrol/retrofit program is the best way for companies to extend the productive life of their older machines for years to come, take their performance to levels expected today, and at the same time save tremendously versus the cost of new equipment."

The MTB recontrols/retrofit program is available for all major gear grinding machine makes and models, in size ranges 400 mm and above, and can be performed at the customer's facility or at MTB, depending on the customer's location, requirements and machine size.

See these solutions, and more, with a visit to: M+PT Expo Booth #3206

About Machine Tool Builders Inc.

Established in 1995 as a machine tool service organization, MTB is today renowned as the gear industry's leading source for a complete array of machine rebuilding, recontrols and service of all popular gear manufacturing machine makes and models. Most recently, MTB has added to its total product offering, with the addition of world-class new machine brands for the complete production of fine- and medium-pitch cylindrical gears. These include: HAMAI horizontal hobbing machines, SMG vertical hobbing machines, BURRI generating and profile grinding machines and Donner + Pfister gear inspection systems.

For more information, contact:
Ken Flowers

Machine Tool Builders Inc.
kflowers@machinetoolbuilders.com
www.machinetoolbuilders.com

MAS INDUSTRIAL SUPPLY – BOOTH #3635

Mas Industrial Supply LLC is a woman owned company established to supply the most critical parts for different industries such as machinery industry and defense industry.

Mas Industrial Supply is the agent of two reducer gearbox producer companies: PGR Drive Technologies and NRW Drive Technologies in the United States of America. As an agent of NRW Drive Technologies and PGR Drive Technologies, we continue our activities by using simultaneous engineering methods in order to meet the needs of our customers at maximum with a wide range of products.

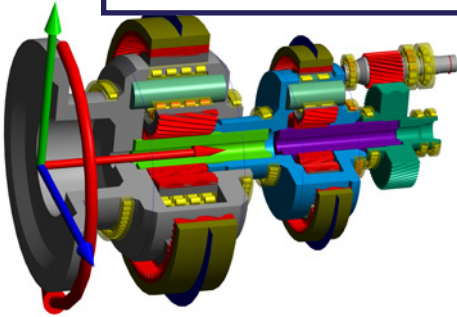
MCINNES ROLLED RINGS – BOOTH #2516

McInnes Rolled Rings specializes in seamless rolled rings from 4"-144" diameter and forged discs up to 60" diameter in carbon, alloy & stainless steel. Our AS9100 & ABS certified plant in Erie, PA combines the latest in ring rolling technology with experienced people, resulting in the best value and the fastest deliveries in the industry.

mcinnesrolledrings.com
sales@mcrings.com
(800) 569-1420



MESYS AG – BOOTH #3128



MESYS offers software for mechanical engineering. The shaft system calculation is a fully coupled system calculation and supports following features:

- Shafts connected by bearings, cylindrical gears, bevel gears, worm gears, couplings or belts
- 3D-FEA based planet carriers and housings using STEP import
- Support for elastic bearing rings and elastic gear bodies
- Support for load spectra and parameter variations
- Gear strength calculation according to ISO 6336
- Bearing life calculations according to ISO/TS 16281
- Shaft strength according to DIN 743
- Line load distribution for cylindrical gears and load distribution for bearings

MPT PODCAST STUDIO – BOOTH #3435



Industry Podcasts Hosted Live at MPT Expo

For the first time ever, Motion + Power Technology Expo will welcome three live Podcasts directly on the show floor. In addition to all of the important business deals happening with attendees and the exhibitors, radio hosts will be interviewing subject matter experts on all facets of the gearing and power transmission industry to include: supply chain, workforce issues, technology, product development, leadership and so much more. The featured podcasts include: Manufacturing Talk Radio with Lewis Weiss, SEW-EURODRIVE: Driving the World with Culley Holland and Manufacturing Talks with Jim Vinoksi. Make sure to visit, perhaps even do an interview or just watch through the clear booth walls as MPT Expo travels out far beyond the city limits of Detroit.

NAGEL PRECISION INC. – BOOTH #3516

Excellence in Honing, finishing & Clamp bore face grinding

- ECO 20: Vertical hone for up to 20 mm bore diameter
- ECO 40: Vertical hone for up to 40 mm bore diameter
- ECO 80: Vertical hone for up to 80 mm bore diameter
- ECO 120: Vertical hone for up to 120 mm bore diameter
- ECO 180: Vertical hone for up to 180 mm bore diameter
- TF4-20: Tape and stone superfinishing machine
- DM 50- Deep hole drilling machine up to 1/2" bore
- DM 75" Deep hole drilling machine up to 3/4" bore
- Nagel SPV 150 clamp bore face grinders for gear face grinding, generates excellent bore to face perpendicularity and better alternative to double disk grinding.
- BF Series inner and outer bearing race finishing machines

NAPOLEON ENGINEERING SERVICES – BOOTH #3324



NES Bearings is your one-stop shop for all bearing projects!



Napoleon Engineering Services, founded in 1997 in Olean, NY, is a privately-owned, one-stop shop for engineered bearing products, specializing in bearing inspection, bearing testing and custom bearing manufacturing. With a thorough understanding of bearing design, manufacturing, inspection, and testing, NES provides clients with a resource for all bearing needs.

NATIONAL FILTERS INC. – BOOTH #3833



HYDRAULIC FILTERS

National Filters (NFI) is an ISO 9001:2015 certified industrial filtration manufacturer located in Harbor Beach, MI. NFI manufactures hydraulic, lubrication, marine engine air, wet/dry vac and dental filtration under the National Filters brand. Customers can cross reference, check on stock levels, view discounted pricing, view and print technical data sheets, compile a quote request or order direct from our website at www.nationalfilters.com. NFI also runs multiple contract manufacturing lines manufacturing custom filtration products for over 60 different OEM and competitive filter companies.

NICHIEI CO. LTD. – BOOTH #3028



Nichiei



Nichiei excels at injection molding high performance, precision polymeric parts, specializing in all types of gears including spur, bevel, worm and helical gears. We design and manufacture many JGMA Grade 0 (AGMA Grade 12-13) gears and can maintain these exceedingly tight tolerances due to our seamless, fully integrated, in-house operations of gear design, material flow simulation, mold design, mold manufacture, prototyping, commercial production using proprietary injection molding technology, and final performance measurement and inspection. Controlling all steps in the process ensures full accountability within Nichiei and real-time feedback, enabling short lead times and low costs. We work with all types of polymers, including PEEK, PAI, PEI, PPSU, PES, PPS, PA and POM and help our customers choose the best material to meet their cost/performance goals.

We now offer highly specialized gear performance testing and inspection equipment, including:

- Gear Rolling Tester to ensure gear accuracy
- Gear Durability Tester to measure gear durability at various rotation speeds and torque
- Exacting Inspection Equipment for teeth and lead profile measurement
- Exacting Inspection Equipment for gear alignment measurement
- Exacting Inspection Equipment for angle and roundness measurement

Come visit us at Booth #3028 to see demonstrations of our Gear Durability Tester.

NIDEC MACHINE TOOL AMERICA, LLC – BOOTH #2300



NIDEC Machine Tool America's exhibit at the Motion + Power Expo 2023 will be an exciting place to be from the 17th to the 19th of October. In the spotlight is NIDEC's new CF26A Cut Chamfer System.

This new chamfer machine was honored with the prestigious 53rd IDEA "Judges Committee Special Award" at the 53rd Machine Design Awards. NIDEC's Tool Design Simulation software creates the perfect chamfer shape before machining even begins. The specially designed ChamferX tools create the exact specified chamfer through the entire tooth, including the root.

The CF26A's Unique Circuit Configuration saves time by aligning workpiece grooves and tool blades and the Dry-Cut Method is environmentally friendly with no need for coolants, reducing the ecological impact.

Sharing the machine spotlight is the GE15HS. This machine features a specially cooled high-speed hobbing spindle that can operate at up to 6,000min⁻¹, with stability and accuracy. The GE15HS can cut wet or dry and takes full advantage of NIDEC's GRANMET SF hob substrate and Mighty Shield Σ coating for maximum productivity.

Complementing the fast cycle times of the GE15HS is the Load & Go system from Automation Within Reach. This automation system easily integrates with NIDEC gear machines and is easily changed over for a wide variety of parts. This combination provides the optimum solution for profitable production.

Federal Broach, part of the NIDEC family of companies, will exhibit a new broaching machine as well as NIDEC cutting tools. Federal Broach will display their in-house tool sharpening and recoating services as well. In addition, visitors will see sample parts from NIDEC's LAMDA DED additive manufacturing systems.

Underpinning NIDEC Machine Tool America's dedication to their customer's success is an extensive program to have machine tools in stock for quick delivery. Hobbers, shapers and gear grinders are all available for quick delivery and visitors can take advantage of M+PT Expo special pricing. Visitors to the NIDEC booth, number 2300, will also be able to discuss the financing and leasing options available.

NORTON | SAINT-GOBAIN - BOOTH #3813

See Innovative Norton Grinding Technology

A range of high performance, innovative production grinding wheels and



technology will be highlighted at MPT including Innovative Quantum™ Prime Grinding Wheels, which feature proprietary nano-crystalline ceramic grain offering unprecedented productivity gains across a wide range of applications, will be featured. Also, high performance IDeal-Prime Internal Diameter Grinding Wheels for precision applications featuring Quantum Prime nano-crystalline ceramic grain and an advanced bond, ensure long wheel life, excellent grinding

efficiency, and consistent part quality with superior surface finishes which results in cost savings of 30% and more.



Additional key Norton grinding technologies include Xtrimium™ gear grinding solutions designed for high performance gear grinding in extreme, tight tolerance environments. For the high performance external grinding of cam and crankshafts and internal grinding applications in automotive and bearing industries, Vitron7™ cBN Grinding Wheels will be highlighted. Attendees can also see Finium™ abrasive micro-finishing film rolls for precision applications and Stellar insert-ed-nut grinding wheels for double and single disc grinding.

www.nortonabrasives.com

SEE OUR AD ON P. 19

OELHELD U.S., INC. - BOOTH #3422

oelheld - Your specialist for metalworking fluids.

oelheld develops grinding fluids, cutting fluids and water-soluble fluids for many different applications.

oelheld is a leader in innovative metal fluid technology and announces the availability of domestically manufactured DiaGrind 535-15. The multifunctional DiaGrind 535-15 has been used successfully on gear hobbing, gear grinding and even for gear shaping applications on machines like Reishauer, Gleason Pfauter, Klingelberg and Hoefler among others.

ASK ABOUT OUR DIAGRIND, SINTOGRIND AND DIAMILL LINES FOR GEAR GRINDING AND GEAR HOBGING.

Human technology is not just a trademark at oelheld – it is our guiding principle for a better future.

Step up a gear & Put us to the test !!!

OMNI GEAR & MACHINE CORP. - BOOTH #3716

Since 1988, Omni Gear & Machine Corporation has specialized in the manufacture of precision-machined custom gears in a variety of sizes and types, including:

- Spurs
- Helicals
- Clusters

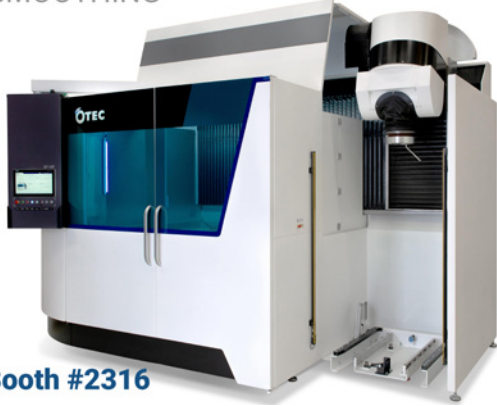


- Worms
- Worm gears
- Sprockets
- ...and more

OTEC PRECISION FINISH – BOOTH #2316

**STREAM FINISHING
UNITS • SF-HP • Stream
Finish Takes on Larger
Loads**

**POLISHING
DEBURRING
SMOOTHING**



Booth #2316

The SF-HP is the latest member of the SF-Series and the world's only stream finishing machine for the surface finishing of large and heavy workpieces. With the proven OTEC Stream finish-DNA!

Like the entire SF-Series, it therefore ensures smoothing, high-gloss polishing, edge rounding and deburring in a single operation, in just a few minutes and without damaging the contours of the workpiece. Due to the path-controlled motion sequence, it is possible to target and process individual areas of a workpiece particularly intensively.

We look forward to seeing you at our booth #2316 and on our website otecusa.com.

PALMARY AMERICA – BOOTH #3603



Experience the future of precision engineering with Palmary Grinders, EMCO Turning Machines, and OSG Spline Rolling Machines at the Motion and Power Show in Detroit 2023. Palmary's cutting-edge grinding solutions offer unmatched performance and efficiency. EMCO's advanced turning machines deliver precision and productivity. OSG's state-of-the-art spline rolling machines provide cost-effective solutions. Explore innovations driving industries forward, revolutionizing motion and power applications. Visit Booth #3603 to witness industry-leading capabilities and meet experts committed to your success. Elevate your manufacturing process with us. Don't miss this opportunity. See you in Detroit!

PENN MACHINE COMPANY LLC – BOOTH #3823

Setting the Standard for Excellence in OEM & Aftermarket Mass Transit, Rail & Industrial Wheels, Gears & Gearboxes

Penn Machine Co. manufactures wheels, wheelsets, trucks, axles, gears and gearboxes. Our equipment is used for OEM and aftermarket applications in the transit, railroad, industrial and mining sectors. We also service and rebuild transit gearboxes and wheelsets. The company was founded in 1920 as Penn Smokeless Coal Co. to manufacture replacement parts for coal mining equipment and service the mining industry. Penn Machine is headquartered in Johnstown, PA, and has operations in Johnstown and Blairsville, PA. We are part of The Marmon Group, a global organization of diverse businesses owned by Berkshire Hathaway Corp.

PHILADELPHIA GEAR, POWER SYSTEMS BY TIMKEN – BOOTH #3622



We now supply and service the complete industrial drivetrain

Drawing on a global pool of engineering expertise and technological advancements, our newest offering provides a comprehensive suite of industrial repair, upgrade and service solutions. When viewed as an integral part of your operations, these solutions can reduce downtime and your total cost of operation.

From electrical to gearbox to bearing repair solutions, trust our key brands under Timken Power Systems to help maximize your powertrain and rotating equipment's reliability and performance.

- Greater Reliability & Performance
- Advanced Technologies
- Aggregate Cost Savings Achieved with a Comprehensive Service Partner
- Comprehensive Repair, Upgrade and Service Solutions for Industrial Powertrains
- Engineering Expertise
- In-depth Knowledge Base
- Network of Regional Manufacturing and Service Centers

PISELLI ENTERPRISES INC. - BOOTH #3600



Your #1 Source for Gear Machinery!

If you're looking for quality used gear and support equipment, look no further than Piselli Enterprises Inc. With over 30 years of experience, Piselli Enterprises has been a go-to source for new, used, and rebuilt gear equipment for thousands of customers. Allow us to serve all your needs, whether that's a simple machine requirement or a turnkey project. Trade-ins are accepted, and we sell parts, too. No matter your gearing goals, we are here to help. As the past owner of RP Machine Enterprises, I was always on the cutting edge as well!!

Our brands include Gleason, Höfler, G&E, Fellows, Barber-Colman, Reishauer, SU, Schiess, Maag, Tos, Mitsubishi, Kapp, and more.

Contact Rich Piselli at (704) 609-0766 or Rich@PiselliEnt.com for a booth meeting time.

MPT EXPO EXHIBITOR LISTINGS

PMG INDIANA - BOOTH #3832

PMG - Your partner for powder metal and automotive solutions

Mobility is a key human need. We want to move ahead, discover new things and shape the future. PMG is a leading global supplier of sintered automotive components and systems. Utilizing our proprietary processes of Densiform[®] and Radiform[®], PMG Group develops tailored powder metal solutions for its customers that set standards today for requirements of the future. Our passion is for products and processes perfectly geared to each other.

POWER TRANSMISSION ENGINEERING MAGAZINE - BOOTH #3132

Power Transmission Engineering[®]



Power Transmission Engineering is the magazine of mechanical components, serving a wide audience of design and plant engineering professionals. PTE is the only B2B trade publication focusing exclusively on gears, bearings, gear drives, motors and other mechanical power transmission components,

and our articles are aimed at both OEM design engineers and plant and maintenance professionals in the MRO sphere. So if your customers buy gears, they're probably reading *Power Transmission Engineering*. PTE is owned and published by the AGMA since 2020, and we'd love to have you stop by to learn more about what we do.

POWER TRANSMISSION GROUP - BOOTH #3126

Hy-Tech's Power Transmission Group, formerly known as Quality Gear, Blazman Gear, Gear Products and Jackson Gear, is a custom gear manufacturer located in Punxsutawney, PA and a member of the American Gear Manufacturers Association (AGMA).

Our 52,000 square foot facility contains well over 200 CNC and manual machines used in production with extensive inventory of custom and specialized tooling. The quality verification lab ensures that all products meet exacting specifications dictated by the AGMA.

In addition to being a custom gear manufacturer, we can reverse engineer old gears or design new gears or gearboxes utilizing CMM, SolidWorks 3D and KISSsoft modeling software.

PRECO, LLC – BOOTH #2315



Preco is a premier provider of laser, flat bed and rotary die cutting equipment solutions for advanced material processing needs. We are a leading designer and manufacturer of high-speed and high-accuracy automated processing systems. In addition, Preco is a skilled laser integrator offering cutting, perforating, welding and other specialized industrial processing applications.

With our proprietary die cutting and laser-based manufacturing capabilities, we are one of the largest contract manufacturing service providers in North America offering laser cutting, scoring, perforating, welding, cladding, heat treating and die cutting services.

PROFILATOR – BOOTH #3217



GMTA Introduces New Profilator 300-V

Modular inverted vertical gear cutting system with SCUDDING® technology

German Machine Tools of America (GMTA) (Ann Arbor, MI) is now selling Profilator 300-V with linear drives in the North American market.

This modular machine platform for gear cutting is equipped with one or two workpiece spindles in a compact design. It offers maximum flexibility due to its modular design and is individually configurable for various machining processes (i.e. SCUDDING®, hobbing, cycloidal milling, pointing, chamfering and deburring). State-of-the-art linear drives in the X and Y axes, as well as a torque drive in the A axis, offer high

machine dynamics for short cycle times and maximum accuracy/low costs. High machine rigidity is available for HARD SCUDDING® of inner and outer diameters.

Additional features include an intuitive user interface for easy setup and programming and Industry 4.0 capability (optionally equipped with additional sensors). Various automation concepts are easily adaptable. The 300-V is easy to set up and maintain due to the “walk-in” machining area. An optional tool changer is available for maximum machining efficiency.

All Profilator machines are designed for dry machining. This brings several advantages such as: an optimized machining area, no coolant and no coolant mist. The inverted, vertical spindles allow free chip fall into the central chip conveyor at the bottom, while no coolant means no washing of the workpiece is required and the lack of coolant mist signifies an extraction system isn't needed.

Users of the Profilator 300-V reap benefits regarding the environment, energy efficiency, investment and operating costs. There is no carryover of the coolant outside the machine. Therefore, no disposal is required for this environmentally friendly machine. It saves energy and money by not requiring a coolant and extraction system. Lower operating costs are achieved thanks to a reduction in energy costs and media supply.

For more information:
German Machine Tools of America
4630 Freedom Drive
Ann Arbor, MI 48108
www.gmtamerica.com

PROFIROLL TECHNOLOGIES USA, INC. – BOOTH #3619

The Profiroll business concept is strongly oriented on customers' sophisticated technical requests for profiling rotationally symmetric parts using the most modern cold forming technology, leading finally in a development of an efficient manufacturing with profile rolling.

The customer will be served with machines, handling and conveying systems, rolling dies as well as reliable processes from one source.

Additionally, Profiroll carries out development until SOP-phase of a prospective serial production.

Profiroll has a very successful history of innovations based on our experienced and competent engineers.

QUALITY GEARS – BOOTH #3818



Quality Gears specializes in custom gear solutions catering to a diverse array of applications. Our expertise encompasses a comprehensive range of gear cutting processes and associated support activities, ensuring the delivery of precisely tailored end products.

Our Capabilities include:

- Gear Hobbing
- Gear Shaping
- Thread Milling
- Gear Grinding
- Thread Grinding
- Surface and ID Grinding
- Turning and Machining solutions

Our Product Line comprises:

- Gears (Spur, Bevel, Helical)
- Sprockets
- Timing Belt Pulleys
- Worm and Wheel set
- Rack and Pinion set
- Gearbox & Gear sub-assemblies

Our trusted US representative:
 Accurate Module LLC
 28188 Golf Pointe Blvd,
 Farmington Hills, MI 48331

RADIAC ABRASIVES, A TYROLIT GROUP – BOOTH #3007

Radiac is a leading manufacturer of Conventional Bonded and Superabrasive cutting wheels in North America. For more than 100 years, Radiac has delivered innovation and quality in grinding tools and service.

Acquired by Tyrolit Abrasives in 2009, Radiac is your North American company for high-performance Tyrolit brand products for the Automotive, Bearing, Aviation, Cutting Tools, and Primary Metals Industries.

Headquartered in Oswego, IL, with manufacturing plants in Salem, IL, and Marysville, WA, Radiac is the leading full-line producer of grinding wheels. Radiac offers precision-built products for high quality, performance, and repeatability for virtually every possible manufacturing application. Radiac's industry team approach combines sales and engineering expertise to determine the most cost-effective and expedient solution for your grinding needs.

RAMKRISHNA FORGINGS LTD. – BOOTH #3413



RKFL has precious advanced machining equipment for soft machining as well as hard finishing of gears, shafts (spur, helical, taper root). Our machining capabilities include gear cutting through hobbing, shaping and broaching. We also offer fine tuning on gear profile according to customer requirement through shaving, gear grinding and gear bore; face finishing through bore grinding, bore honing, and grinding machine.

Capabilities in manufacturing of gears are as- GEAR OD- 400 MM MAX, MODULE- 14 MAX, MAXIMUM LENGTH OF AXLE SHAFT 1200 MM. DIN ACCURACY- IN HOBBING DIN CLASS 8, HOBBING+HT DIN CLASS 9, IN SHAVING DIN CLASS 6 TO 7, SHAVING+HT DIN CLASS 7 TO 8, IN GEAR GRINDING DIN CLASS 6.

RAZZAQ ENGINEERING WORKS – BOOTH #3815

Razzaq Engineering Works, founded in 1986, is a manufacturer of precision, straight bevel, Curvic couplings, helical and spur gears, and gearboxes. The company, a supplier to the tractor and commercial industries, features an in-house heat treat department and state-of-the-art equipment, including key technologies like gear inspection GOULDER MIKRON & CMM systems. Among our diverse customer base, we have supplied gearing for Aftermarket, power tools, Oil Rigs equipment, printing presses, harvester, combines & ro-tovator, machine tools and many other products.

Razzaq Engineering Works has a long history of producing high precision gearing for transmission systems. In fact, REW produces more loose gears for 3 wheeler auto rickshaw engines (2-stock & 4-stock), and tractors (Massey Ferguson, New Holland (Fiat), Ford) than any other gear manufacturer.

REASONTEK CORPORATION – BOOTH #3328

Based in the U.S., Reasontek Corporation is a leading manufacturer of accumulator products and an expert in flow control solutions. Major products include high-pressure and low-pressure accumulators, surge suppressors, pulsation dampeners in carbon steel and stainless steel.

Standard products are ASME coded, NB registered with U stamp.

Various applications including hydraulic lube oil, oilfield, water and chemical services with custom design options.

Capacity:

High Pressure RAS: 1L to 15G, 2,000/3,000/5,000 PSI, carbon steel, stainless steel

Low Pressure RAL: 2.5G to 15G, 250-750 PSI, carbon steel, stainless steel

RPK PULSEKUSHON: 40G to 150G, 250/500 PSI, carbon steel, stainless steel

Accumulator Service:

Parker/Hydac accumulator repair, rebuild.

REISHAUER CORPORATION – BOOTH #2622



Reishauer continues to have a decisive influence on modern gear manufacturing. Since we developed the world's first generating gear grinding machine, we have been driven to consistent innovation.

Reishauer provides unprecedented possibilities to improve your grinding and dressing processes and machine maintenance with the help of our expertise and newly available data science. Process monitoring, optimizing with data analysis, identifying necessary maintenance work in advance, planning efficiently and reducing downtime to a minimum.

Reishauer's MPT customer experience will provide an immersive technical journey. Empower your organization with myReishauer. myReishauer is a customer application platform connecting your organization to the digital world of Reishauer. Come see how the value of how Argus eyes on your grinding process will benefit your organization. The RZ x60 4.0 series combines the proven machine basis of the RZ x60 series, including its highly efficient double-spindle technology with the latest control technology, modern interfaces and is ready for future Industry 4.0 requirements. Immerse yourself in our virtual machine and experience Polish Grinding. Reishauer ensures that our customers can achieve the full performance potential of Reishauer generating grinding machines with our own Swiss made tooling. Explore it hands on and let show you how Reishauer's expertise and manufacturing quality guarantees optimum process reliability in the long term.



Reishauer invites you to be our guest. Refuel yourself, your device and connect your organization with technology and unmatched customer service in an experience that will add value to your production.

Visit the Reishauer booth # 2622

SEE OUR AD ON P. 13

SEE OUR ARTICLE ON P. 12

RELIANCE GEAR CORPORATION – BOOTH #3024

Reliance Gear specializes in the manufacturing of custom precision gears and assemblies for a wide variety of industries, including defense, aerospace, agriculture, mining, marine, oil and gas, printing, construction, industrial and commercial markets. We leverage technology, expertise, and production versatility to offer flexible solutions and provide our customers with precision gearing that meets some of the toughest specifications, with fast turnaround and the highest level of customer service. Reliance Gear is a subsidiary of Ashot Ashkelon Industries, manufacturer of advanced systems and components for the international aerospace and defense industries.

REM SURFACE ENGINEERING – BOOTH #2820



REM Surface Engineering, the inventor of the ISF[®] Process, is a global provider of surface engineering solutions and the world's leader in isotropic superfinishing. REM's ISF Process is the ultra-precision application of our ISF Technology, extensively used in gearing applications including aerospace, electric vehicles, and heavy-axle/off-highway. ISF Surfaces outperform essentially all other surfaces in contact fatigue, scuffing, extreme conditions, break-in, and efficiency testing. REM's ISF Technology is available as an outsourced process or via a processing equipment installation at your facility. REM's quality management system is certified to ISO9001:2015 and AS9100:2016 Rev D.

RILEY GEAR CORPORATION – BOOTH #2513

Riley Gear manufactures custom gearboxes and precision ground spur and helical gears. Manufacturing capabilities range from 0.25 inches to 40 inches in diameter. Our precision ground gears can meet AGMA Class Q15 or DIN 2 specifications. Precision is our business. For more than 75 years, Riley Gear has partnered with original equipment manufacturers worldwide to create custom solutions for a variety of industries including:

- Aerospace and Defense,
- Machine Tools
- Centrifugal and Turbo Compressors

- On Highway Automotive
- Off Highway Vehicles
- Marine Propulsion
- Alternative Energy and Power Generations
- Pumps,
- Transportation
- Robotics

Our world-class collaborative design and engineering services deliver prototype to production support for the most sophisticated of applications. Riley Gear is a registered TS 16949, AS9100, ISO 9001 and ISO 14001 manufacturing facility. With 100,000 square feet of manufacturing facility between Buffalo NY and St Augustine, FL Riley Gear is ready for your next project.

ROTEC TOOLS LTD. – BOOTH #3522



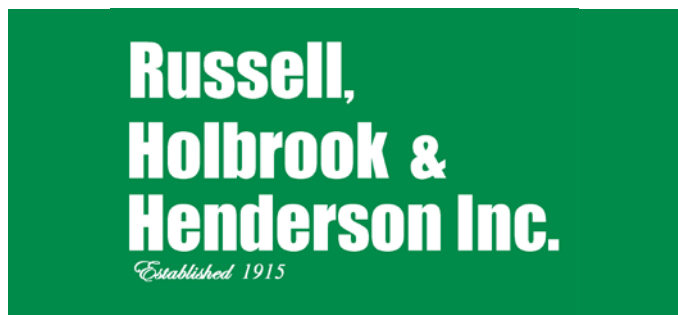
Rotec Tools Ltd. Mahopac, NY (www.rotectools.com) is representing:

- Affolter Group SA, Switzerland – Gear Hobbing Machines. Specialized in gear size up to 12.7 DP Module. The New AF160 machine has many gear-cutting options, including internal gear skiving and worm hobbing.
- Diametal Swiss Cutting Tool – “Simply Different” Specialized in Precision Carbide Gear Hobbing Tools. Wide range of fine-pitch hobs, including fly cutters, bevel and face gear hobs. Metric or standard.

Rotec Tools offers sales and technical support for the product lines.

For more info see: Affolter Group and Diametal.
See us at the Booth 3522.

RUSSELL, HOLBROOK & HENDERSON – BOOTH #2616



TRU-VOLUTE

RHH Inc. was founded in 1915 and since then, has established itself as a leader in the precision fine-pitch gear industry. A history of over 100 years providing manufacturers of small gears with quality tooling under our brand name Tru-Volute. We stock over 2,000 gear tools available in HSS and solid carbide with advanced coatings and for immedi-

ate delivery. Stop by our booth to speak to a product specialist regarding your gear manufacturing applications.

- Hobs: AA Carbide for Hard Hobbing
- Shaper Cutters
- Spur / Helical Master Gears
- Worm Milling Cutters
- Shank type hobs
- Power Skiving tools
- Special profile gear tools



S.L. MUNSON & CO. – BOOTH #2610

S.L. Munson & Company is the North American representative for Dr. Kaiser Diamantwerkzeuge GmbH & Co. and Krebs & Riedel Schleifscheibenfabrik GmbH & Co. KG. Our qualified local reps provide application and process development support to gear producers and OEM builders of gear grinding equipment. Stop by our booth to speak to our product specialists regarding your diamond dressing and grinding applications.

Dr. Kaiser is a world leader in rotary diamond dressing tools for parallel and bevel gear grinding applications. Krebs & Riedel offers customized tools and individual grinding solutions for continuous generating grinding, single profile grinding, bevel gear grinding and power honing. Under our brand name, MB Superabrasives, S.L. Munson & Co. markets direct plated Diamond Dressing Gears (DDG) for gear honing applications. IGA Abrasives is a Grand Rapids, MI based producer of vitrified conventional and superabrasive (CBN) ID wheels, fine grit cup wheels, honing abrasives and super finishing abrasives to 1200 grit.

Contact: Bryan Decker - bdecker@slmunson.com - 803-252-3211

SEE OUR ARTICLE ON P. 14

SEE OUR AD ON P. 17

SCHAEFFLER DIGITAL SOLUTIONS GMBH – BOOTH #2324

Schaeffler Digital Solutions GmbH develops and integrates the web-based autinity software, which is able to acquire and process entire data sets from the most varied machines thanks to its high degree of compatibility with existing systems, sensors and controllers. As a result, our customers can avoid unplanned downtimes, enhance the productivity of their equipment and safeguard the quality of their products.

With systems for process analysis, machine data acquisition, energy management, digitally supported shopfloor management and many other innovative software solutions, we are contributing our share to the factory of the future – in full alignment with our guiding principle “Productivity for Tomorrow”. Schaeffler Digital Solutions GmbH as a subsidiary of the Schaeffler Group is part of the Production, Supply Chain Management and Purchasing divisions within the Group; currently, approximately 70 employees are engaged at Schaeffler Digital Solutions GmbH Chemnitz.

Phone: +49 371 27332748
Email: info.autinity@schaeffler.com
www.schaeffler-digital-solutions.de

SCHAFER INDUSTRIES – BOOTH #2826

When you need a gear or driveline solution, this is where you will get it.

It's frustrating to have a gear or driveline problem and no one with the expertise to solve it. Or to come up with an innovative idea for your product or vehicle, but all you can find are modifications to off-the-shelf designs that don't meet your needs.

At Schafer Industries, you won't get frustrated. For more than 85 years, we have solved some of the toughest challenges with our custom-engineered gear and driveline solutions. We integrate that knowledge, experience and technology in ways few in our industry can. Working with Schafer Gear Works, Schafer Aerospace or Schafer Driveline, you can build better performance, greater cost-savings and higher customer satisfaction into your products.

This is why our gear and driveline innovations power some of the most respected products and vehicles in the world. It's why companies in an ever-expanding list of industries from aerospace to underground mining turn to our engineers and manufacturing teams to help them stand out from their competition.

SEE OUR AD ON P. 11

SCOT FORGE – BOOTH #3222

See Scot Forge for your Custom Open Die/Rolled Ring Forgings

With experts on various AGMA committees, we at Scot Forge understand your material specification requirements and can provide more reliable and accurate quotations, faster. Using our in-stock tooling, we have the ability to quickly manufacture near-net-shape forgings, torch-cut gear blanks and deliver a variety of other configurations to help meet your needs.

Based in Spring Grove, IL, USA, Scot Forge has a 125+ year track record of success. Scot Forge is considered the industry leader in open die forging and rolled ring forging. As the premier provider of high-quality metal forging solutions, we have experts in your specific industry to help deliver the largest range of open die forging capabilities.

Today we have the capability to forge parts weighing up to 300,000 lbs. and roll seamless rings up to 252" in diameter. Operating with more than 1.3 million sq. ft. of manufacturing space between our five plants, including two joint ventures, over 250 million lbs. of forgings are shipped from Scot Forge annually.

SECS INC. – BOOTH #2513



Since 1963 Secs, Inc. has offered an extensive line of standard gears which includes hub and hubless spur gears, anti-backlash gears, miter and bevel gears, worm gears and worms, helical gears, cluster gears and pinion shafts.

We offer a diverse product line including gears, gear heads, gear boxes, bearings, sprockets, belts, couplings, hardware and more. SECS is equipped to provide its ever-expanding line of standard parts or to manufacture to your specification and from other-source part numbers. Our Engineering Support can help you with all your Custom Manufacturing needs.

We promise the best price and fastest response time possible. All quantities of Standard Parts, Specials, and Long-Term Delivery agreements are available for quote.

Visit us at MPT Expo Booth 2513 or <https://www.secsinc.com/>

SEOAM MACHINERY INDUSTRY CO. LTD. – BOOTH #2336

Beyond quality, Gear up with SEOAM!

SEOAM manufactures high precision gears for a wide variety of industries, high precision and high quality chucks and cylinders, and curvic couplings which are used for index equipment based on accumulated technology.

- High Quality. Secure quality management systems are implemented from materials to heat treatments and grinding processes.
- High Reliability. Gears manufactured by cutting-edge machines guarantee high quality and durability.
- Low noise and Low vibration. Crowning and profile-modification applied to gears so they can be used in high speed rotation.
- Specialized in gear reducers. Large sized gear reducers for ships and industrial purposes.

SERVICE HEAT TREATING – BOOTH #3228



Service Heat Treating is the top provider of nitriding, batch and vacuum heat treating services in Southeastern Wisconsin and Northern Illinois. Our quality system is registered to ISO 9001:2015. Our 2023 CAT audit received a 98% score.

Services include:

- Carburizing,
- Carbonitriding,
- Annealing,
- Neutral Hardening,
- Normalizing,
- Nitrocarburizing,
- Ferritic Nitrocarburizing &
- Vacuum Processing with up to a 15 bar quench.

We have an in-house laboratory consisting of macro-hardness testers (Rockwell & Vickers), automated micro-

hardness tester, sample preparation equipment and more. Transportation is available. We are locally owned and operated in Milwaukee, Wisconsin.

Find us online at www.serviceht.com.

**SHANGHAI YININ BEARING AND TRANSMISSION COMPANY
- BOOTH #2534**



Shanghai Yinin Bearing & Transmission Company was founded in 2010 coming from an experience of over 10 years in the bearing field. From 1999, starting from representing bearing manufacturers in China, we exported all kinds of bearings. Nowadays we are developing one completed sales and manufacturing bearings group.

Our main products: all kinds of ball bearings, roller bearings, automotive bearings and special bearings, in chrome steel and stainless steel.

SHANTHI GEARS LTD. - BOOTH #2319



Shanthi Gears—a subsidiary of Tube Investments of India—is a pioneer in gear manufacturing and ranks amongst India's top gear manufacturers today. For five decades now, Shanthi Gears, has been the preferred name for gear and gear box solutions, for some of the biggest names in the industry. We are committed to offering precision engineering, reliable quality and complete solutions.

MPT EXPO EXHIBITOR LISTINGS

A listed company, Shanthi Gears, is at the cutting edge of what we do in our domain and are driven by our philosophy—our philosophy to constantly innovate to continue to remain relevant to our customers. It is our innovation that also allows us to offer greater value.

We offer a comprehensive range of products and services—cutting edge gear solutions for a wide range of applications and specialized gear reconditioning services. Our presence in the customized products domain is a strong one, with us occupying a dominant position in the market today.

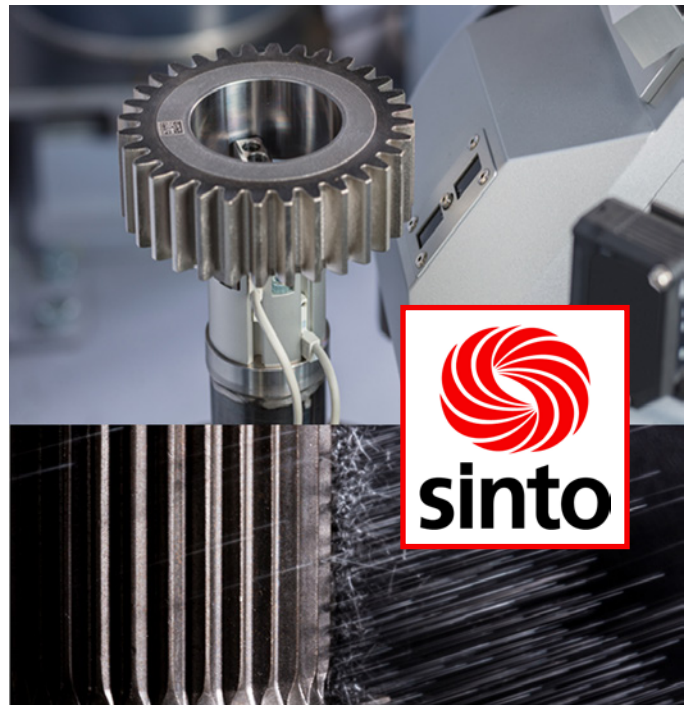
**SINORIA ELECTRICAL MACHINERY
CO. LTD. - BOOTH #3735**



Dedicated to the production of gear transmissions, chain, sprockets and couplings. Offering design, molding and manufacturing of transmission parts. Trust our brand, Sinoria, to help your equipment's reliability and performance.

Whatsapp/Tel: 0086 13287072388
E-mail: jason@gear-box.cn

SINTO AMERICA - BOOTH #3420



Sinto America helps gear manufacturing move toward product control to ensure quality by moving away from sampling inspection and move towards 100% inspection and by moving away from human inspection and move towards fully automated inspection. Visit Booth # 3420 to see and discuss how Sinto America can help you provide an in-line quality inspection process for gear manufacturing. Sinto America will be sharing our booth with Pulstec. On display will be portable X-Ray diffraction equipment used for nondestructive residual stress measuring.

SMT – BOOTH #3224

SMT is a globally integrated leader in mechanical transmission engineering services and software development. Over the past 21 years, SMT has grown from a collective of experienced and passionate engineers into an international enterprise serving all sectors of the transmission and driveline development industry.

We provide both CAE Software and Engineering Services to global driveline sectors including Automotive, EV+HEV, Energy, Heavy Auto, Off-Highway, Rail, Aerospace, Marine, and Robotics.

Through our strategy, dedication, and innovation we promise to continually deliver the most pioneering services and technologies trusted by the world's leading transmission and driveline engineers.

SPECIALTY STEEL TREATING – BOOTH #2626



SPECIALTY STEEL TREATING, inc.

Specialty Steel Treating is a leader in the precision heat treating industry. Since 1956, SST has grown to six operating facilities in two states serving the aerospace, industrial, automotive, and taper bearing markets. We pride ourselves on our three business principles: Outstanding Performance, High level of Integrity, and Continual Process Improvement.

STAGNOLI – BOOTH #3317

We offer a vast catalog of transmission parts in technopolymers compatible with ISO and DIN standards. We can also develop specific projects together with the customer, from the design to the production part.

STAR SU LLC – BOOTH #3209

Welcome to Star SU, LLC.



Star SU LLC – part of the Star Cutter family of companies – offers a wide variety of gear cutting machinery, tools and services including: vertical hobbing and chamfering and deburring machines; hob sharpening machines; hobs, milling cutters, shaper cutters and shaving tools; chamfer and deburring tools; gundrills and reamers; form tools; and tool life cycle management services.

Star SU brand and technology partners include Star Cutter Company, FFG Modul, Louis Belet Swiss Cutting Tools, and GMTA, Inc./Profilator.

STAR SU AND LOUIS BELET HEADSHOT LOUNGE – BOOTH #3807

Headshot Lounge

Is your LinkedIn profile ready for a makeover? Our professional headshot photographer is available to deliver professional quality headshots for attendees, courtesy of STAR SU and Louis Belet.

STRESSTECH INC. – BOOTH #2317

Stresstech is headquartered in Finland and has offices in Germany, the United States, and India, as well as sales and service representatives around the world. For more than 30 years, Stresstech has been providing non-destructive and destructive testing solutions for process control and quality inspection. The inspection equipment and turn-key solutions serve the automotive, aerospace and other manufacturing industries as well as universities and research institutes.

Barkhausen noise analysis is a non-destructive testing method involving the measurement of a noise like signal induced in a ferromagnetic material by an applied magnetic field. Ideal for detection of grinding burn damage and heat treatment defects, customers can test optimize their manufacturing process and deliver the highest quality components.

Stresstech's line of diffractometers are designed for residual stress and retained austenite measurements. This

non-destructive technology can provide customers with reliable, unmatched data for quality control assessment. The Xstress product line of diffractometers is suitable for use in the field, factory, and laboratory settings.

SEE OUR AD ON P. 4

SURFACE COMBUSTION – HEAT TREAT BOOTH #1801

Surface furnaces are built to last, engineered to perform

Since 1915 when the company was founded on a patented heating concept called Surface Combustion, we have continued to redefine performance limits and introduce a wide variety of advancements in thermal processing equipment.

From our initial product lines of small oven furnaces, pot hardening furnaces, aluminum melting furnaces, rivet heaters, and small forge furnaces to the first continuous billet heating furnace to the development of the industry standard Allcase® Batch Integral Quench Furnace to the metal parts furnace designed for the destruction of chemical weapons, Surface showcases our continuous commitment to innovation and technology as a means of meeting the needs of our customers. This is especially evident through our over 675 US Patents and over 75 industry recognized trademarks.

By our 100th anniversary in 2015, there were over 275,000 Surface thermal systems installed worldwide, many having been in operation for over forty years. Surface is proud to manufacture all of our equipment in the U.S.A.

SEE OUR AD ON P. 2

TEC – MATERIALS TESTING – BOOTH #2918



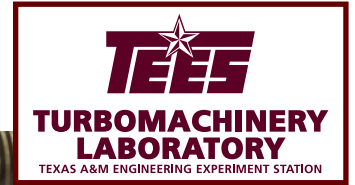
TEC designs and manufactures x-ray diffraction (XRD) systems to provide superior testing of metal and ceramic commercial engineering components. Our systems and services have set an industry standard for residual stress and retained austenite measurements.

Our decades of work with manufacturers across a wide range of industries has given us unparalleled knowledge of and experience in stress analysis applications. We understand

MPT EXPO EXHIBITOR LISTINGS

how important it is that your components are built to endure even the most extreme environments. Our use of the latest technologies and mastery of current analysis techniques make us the natural choice for your materials testing needs.

TEXAS A&M TURBOMACHINERY LAB – BOOTH #3828



The Turbomachinery Laboratory is a center of the Texas A&M Engineering Experiment Station (TEES), located in College Station, Texas. Founded in 1971, the Turbo Lab conducts theoretical and applied research on the reliability and performance of turbomachinery – rotating machinery that extracts or adds energy to fluids. Turbo Lab faculty and staff are proud to continue Texas A&M's land-grant charter and tradition of answering industry needs in basic and applied research, undergraduate and graduate education, and continuing education and professional development. Its numerous activities are sponsored by both industry and government agencies. The Turbo Lab's acclaimed Turbomachinery and Pump Symposia (TPS) is held annually in Houston, and its sister event, the Asia Turbomachinery and Pump Symposia, biennially in Singapore. Both feature a world-class exhibit hall and cutting-edge technical program.

THERMTECH – BOOTH #3821

NOW OFFERING PRESS QUENCHING OF GEARS! ThermTech is a large commercial heat treating company located in Wisconsin that employs over 125 people and is AS9100:2009 certified. We specialize in a variety of heat-treat processes including large batch Gas Carburizing with capabilities of 54" W x 72" L x 36" H, Gas Nitriding, Flame Hardening, Marquenching, Austempering. We are familiar in running a wide range of sizes of Forgings, Castings, Machined components and Investment castings.

Visit us at www.thermtech.net to see!

THORS, LLC – BOOTH #3316

Does your current training program encourage innovative thinking, help people identify quality issues, and contribute to successful troubleshooting?

THORS eLearning Solutions recognizes the unique challenges





TIDC India is having multi locational manufacturing facilities supported with Lean & TQM Initiatives. Customers are serviced through warehouses in USA & Europe and engaged with regional representatives. All the plant locations are certified with ISO9001, API7F, ISO14001 and ISO45001.

TOOL-X, LLC - BOOTH #3226



NFT supplies various environmentally friendly technologies.

Tool-X is a Defense Technology Transfer (T2) company that has created a Military Grade Carbon-based nanofluid for water & oil-based metal cutting applications using nanoparticles (i.e., graphene, & nano-onions) without all the chemicals in the products you are using today.

We transfer heat and lower the coefficient of friction in industrial applications associated with cutting and gear boxes. Here a just a few benefits:

- Double or triple tool-life
- Increase feeds & speeds (10-40%)
- Improves environmental goals.
- Improve the Ra finish!

We fix things! Clean a machine and see what NFT means!

TOOLINK ENGINEERING - BOOTH #2526

With a specific focus on the gear industry, Toolink Engineering, Inc., based in Boulder, CO is the exclusive North American distributor, sales & service center for König-mtm precision work-holding devices, and S&T Dynamics Gear Hobbing machines, Matrix Machines & Boxy Autoloader. König, specializes in hydraulic and mechanical work-holding devices for gear and rotor grinding; gear hobbing, shaping, shaving, honing, and inspection. König-mtm devices are suitable for use on most modern machine tools and inspection machines. S&T Dynamics is a heavy industry South Korean manufacturer, with a line of sturdy workhorse class CNC Hobbers with working ranges from 200mm to 700mm. Driven by Siemens 840D cnc controls, these machines are suitable for job shop requirements as well as automated high-volume production. Additionally, Toolink Engineering carries a complimentary line of versatile laser markers by RMI Laser as well as machine tending automation by Boxy AutoLoader and Globetec Automation. We are a customer service-oriented company with two showrooms (Colorado and Ohio).

of the manufacturing industry. As a trusted learning partner for world-class OEMs and Suppliers, we provide content curated from the minds of subject matter experts. We offer visually engaging online courses with dynamic graphics and interactives which makes learning enjoyable. Our ever-growing library covers Manufacturing Fundamentals, Materials, Processes, Products, Systems, Quality, Engineering Drawings, Industry 4.0, and Emerging Technologies.

For more information visit our booth or our website at www.thors.com.

TIDC INDIA - ROMBO CHAINS - BOOTH #2319



TIDC India, Unit of Tube Investments of India Ltd. is a flagship company of \$ 9.0 Billion Murugappa Group, a leading Industrial Chain manufacturer catering to wide industries like Agricultural Equipment's, Material Handling, Construction, Cement, to name a few. TIDC India has 6 decades of experience in manufacturing of industrial chains, which keep the industry in motion and has been the trusted name for Reliability & Performance.

Product range includes Standard Roller Chains, Leaf Chains, Agricultural Chains, Conveyor Chains, Sprockets, Couplings, Anchor Bolts and other ancillary products. Customer base includes global OEMs, House Brands, Channel Partners, MROs and End Users. TIDC India is connected with more than 40+ countries with global brand ROMBO.

TRIUMPH GEARED SYSTEMS – BOOTH #2532



TRIUMPH Geared Solutions, your one stop shop for complete aerospace and defense geared solutions. Come see us at Booth 2532.

TRIUMPH Geared Solutions provides complex geared solutions including design, development, manufacture and support of complete transmission and gearbox assemblies as well as complex gears and housings.

LOCATIONS: Macomb, MI and Park City, UT

CORE COMPETENCIES

- Power transmission systems
- Integrated gearbox design and build
- Gear components and design and build
- Complex build to print
- Geared actuation

PRODUCTS

- Airframe mounted accessory drives (AMAD's)
- Engine mounted accessory drives (EMAD's)
- Rotorcraft transmissions
- Turboshaft internal gearboxes, emergency power gearboxes
- Engine power take-off, internal gearboxes (IGB's)
- Large complex auto gears (complex spiral bevel gears, bull gears)

AFTERMARKET SUPPORT

Geared Solutions aftermarket spare parts and repair/overhaul support of commercial & defense aerospace. Gearing components and integrated gearboxes for fixed wing, rotorcraft, aircraft engine and ground vehicle applications.

WE ARE AGILE.

WE ARE RESPONSIVE.

WE ARE TRIUMPH.

Let us help you.

TRIUMPHGroup.com

UNITED GEAR & ASSEMBLY, INC. – BOOTH #2919



MPT EXPO EXHIBITOR LISTINGS

Located in Hudson, Wisconsin, United Gear & Assembly is part of a family of companies under parent company United Stars, Inc.

Our history spans 50 years and over that time we've evolved into a multi-million-dollar company and a core supplier of precision gears, shafts, and related assemblies to many global OEMs.

United Gear & Assembly is ISO 9001 and IATF 16949 certified. We have a broad range of capabilities including prototyping, engineering, manufacturing & in-house heat treating.

Learn more about us at ugaco.com, or contact our sales department directly at: sales@ugaco.com.

UNITED PROTECTIVE TECHNOLOGIES, LLC – BOOTH #3335



At UPT we engineer and apply high-performance protective coatings for critical components, like gears, splines, and other moving parts. Our coatings have been designed to provide enhanced characteristics like:

- Increased Wear Resistance – Abrasion & Adhesion
- Greater Corrosion Resistance
- Super-low Friction
- Lubricity
- Increased Hardness

Our customers also benefit from the fact that our coatings are:

- Ultra-thin: 3–5 microns, preserves part tolerances
- FDA Compliant & Food Safe
- Applied using an Eco-friendly process (unlike hard chrome)

You'll enjoy better up-time, less maintenance, and greater reliability. From military to medical, aerospace to automotive, our coatings are trusted to perform and protect.

USINATECH – BOOTH #2528

For over a quarter of a century, Usinatech has been finding the answers to high quality, high volume, highly complex precision machining challenges. Working closely with OEMs and Tier 1 companies, Usinatech has special strengths in critical drive train and transmission components like gears and shafts.





Usinatech provides engineering, precision machining, forming, heat treating, finishing and assembly for OEMs and their suppliers:

- Automotive
- Powersports
- Industrial

VIKING FORGE LLC – BOOTH #2907

Viking Forge LLC is a precision forger utilizing the latest technologies to advance the science of forging. Our 3-D solid modeling package is the foundation upon which our CNC tool making equipment and CMM inspection systems are based. Material flow simulation, computer aided design and manufacturing, advanced process controls, and our automated inspection system are fully utilized to reduce development costs and lead times for new programs. Viking Forge produces both flashless and near net shape forgings as large as 14" in diameter, ranging from 1-95 pounds, featuring 1-2 mm of clean-up-stock. Typical program volumes suiting our equipment/process range from 5,000 to 500,000 pieces per year. Viking Forge LLC is ISO 9001:2015 certified with complete in-house toolmaking capability.

WALKER FORGE, INC. – BOOTH #2917



MOTIONPOWEREXPO.COM

With a production plant in Clintonville, WI. Walker Forge is a provider of forged and heat treated components for OEMs and other manufacturers across North America. With forge presses ranging in size from 850-4000 tons.

Since 1950, our customers have relied on us because we consistently deliver to spec and on-time. ISO9001/TS16949 certified and ISO 17025 Certified Metallurgical Lab on site.

WANT WIN PRECISION CO., LTD. – BOOTH #3717



Want Win Precision Co., Ltd, established in 2004, was a small team at the beginning, made design and drawings only but outsourcing all machining process. Nowadays, we have two factories and manufacture all products in house.

Most of Want Win's products are for drivetrain systems and supplying for tuning and racing market.

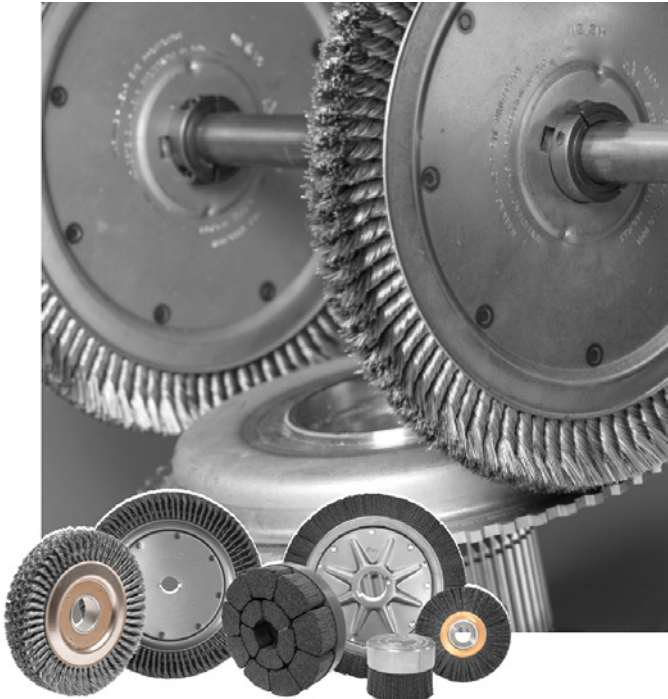
Want Win insist on making only high quality and high performance parts. We continuously invest in good machines and keep improving our skills. With 20-year experiences, our rich knowledge of materials and manufacturing processes enable us to provide brilliant service for our customers.



The WD Bearing Group specializes in providing beyond-the-catalog bearing solutions driving competitive advantages for gearbox manufacturers. Our engineering-focused bearings enhance power transmission efficiency, resulting in energy savings and lower operating costs for your customers. Leveraging advanced design and

manufacturing, our bearings are matched to your gearbox to boost your preferred performance mix. Our experienced engineering team partners with you to tailor solutions meeting your unique requirements. Come explore our range of reliable gearbox bearings promising to give you a competitive edge.

WEILER ABRASIVES GROUP – BOOTH #3801



Stop Letting Inefficiencies Slow Your Gear Grinding Operation

Tired of struggling to meet customer order deadlines because of production delays on gear grinding machines? Imagine a comprehensive process where an expert application engineer audits your gear grinding processes to identify improvement opportunities resulting in quantifiable cost savings.

Alleviating process bottlenecks before they become a capacity-constraint is critical to your bottom line. Weiler Process Solutions (WPS) is a structured application engineering program designed to provide engineering support to identify value added cost savings opportunities in your processes.

At Weiler we understand that every production operation is different. One solution does not fit all. Weiler experts can examine your specific production and product challenges and develop customized solutions that optimize your operation. Our full line of vitrified and resin bonded grinding wheels, super abrasives as well as Wire and Nylox abrasive nylon filament deburring brushes are designed to deliver a competitive edge through increased productivity and profitability.

SEE OUR AD ON P. 23

WELTER ZAHNRAD GMBH – BOOTH #2728

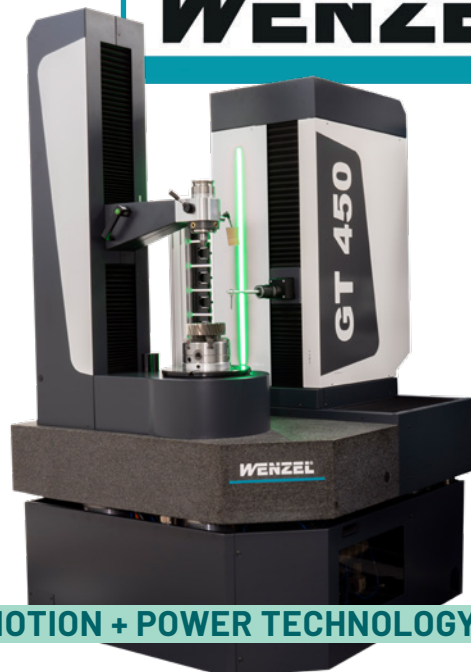
All types of gears and heavy duty worm gear boxes!

WELTER zahnrad manufactures all type of built-to-print gears and face couplings from small to maximum diameter 2500 mm (100 inches) in all industrial, off highway applications:

- Bevel gear sets (Gleason and Klingelberg)
- Spur, Helical and Herringbone gears
- Turbo Gear sets
- Hirth- and Klingelberg Face couplings
- Worm gear sets and Worm gearboxes

Large focus is on 5-axis soft and hard milling of gears, which gives almost unlimited possibilities.

WENZEL AMERICA – BOOTH #2926



To meet the high accuracy requirements in gear measuring technology precisely, easily and quickly, the new GT series from WENZEL has been designed. The GT series is characterized by excellent working ergonomics, simple operation and extensive measuring and analysis options. Our new GT series is based on our successful tradition in the development and production of specialized metrology systems. Whether you are interested in a traditional CMM system or the latest Gear Tester system, WENZEL will be able to find the best possible solution for your business. Visit our booth #2926 and experience the GT 450 firsthand.

SEE OUR ADS ON THE FRONT COVER AND INSIDE FRONT COVER

WFL MILLTURN TECHNOLOGIES – BOOTH #3419



WFL Millturn Technologies – Your offer for a large number of gearing solutions

We are proud that our Flanx gearing solutions bring enormous advantages due to years of development and experience. High quality requirements, profile accuracy and both reliable and flexible machining solutions are key features. Gear cutting on MILLTURN turning-boring-milling center offers perfect conditions for your manufacturing tasks.

Advantages, when working with our gearing solutions:

- Simple and integrated process handling, including validation
- No specialized machine required
- Manufacture using standard milling tools
- Easy measurement of the tooth form
- Project support tailored to your needs
- Great range of gearings, also possible with standard tools

WFL MILLTURN machines stand for flexible, productive and high-quality solutions.

YAGER GEAR ENTERPRISE CO., LTD. – BOOTH #2536



MOTIONPOWEREXPO.COM



With more than 30 years' experience supplying bevel gears from Taiwan to the world, we are one of the leading bevel gear manufacturers in Asia.

We have qualified by IATF 16949, if you are looking for Automotive, Gear Reducer, and Machine center Bevel Gears, don't hesitate to contact us!

Visit our website: www.yagergear.com.
Request for more information: service@yagergear.com.

ZERUST CORROSION SOLUTIONS – BOOTH #3418



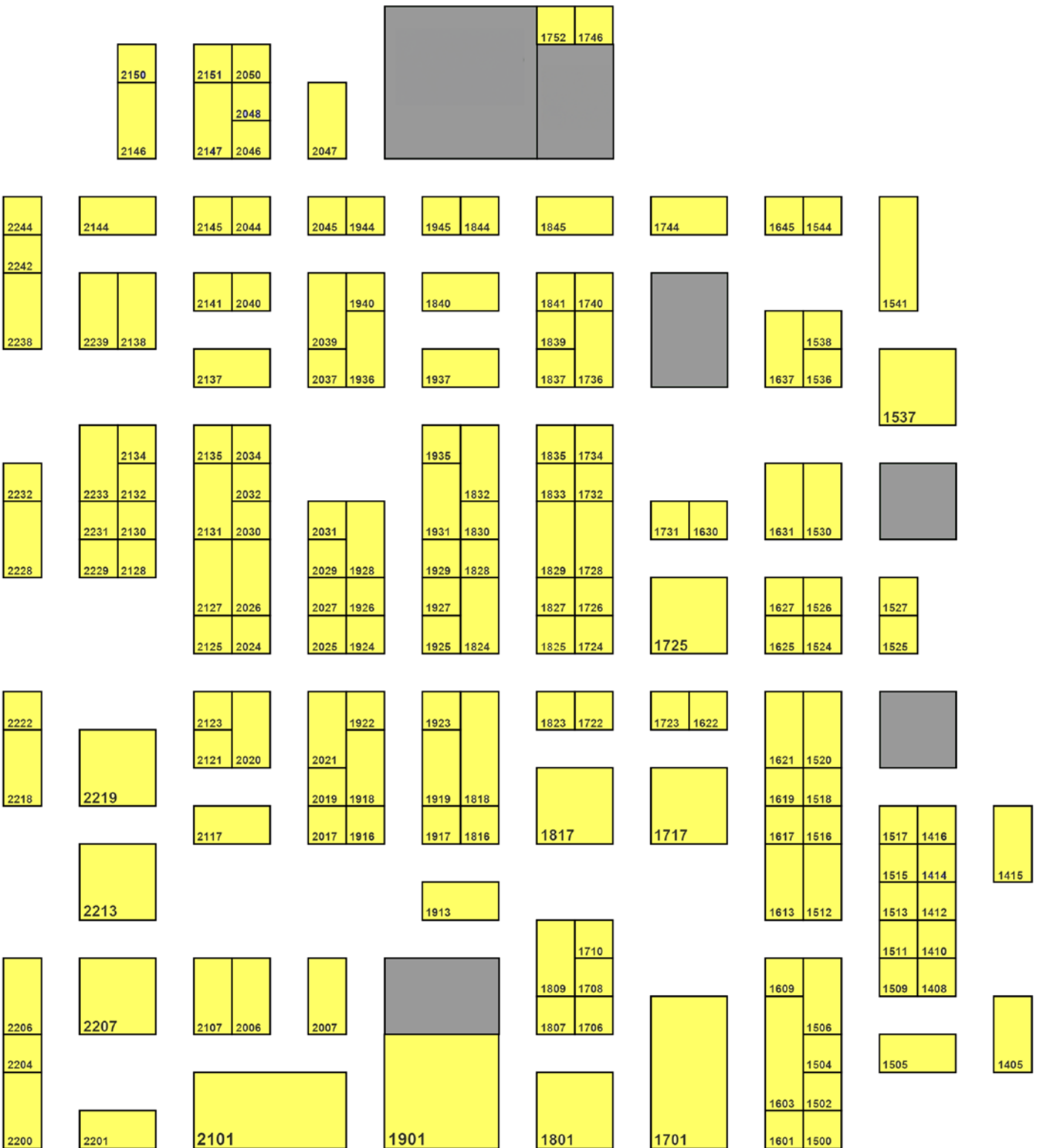
ZERUST® EXCOR®

Visit Booth 3418 to discover how ZERUST® can give you peace of mind with tailored, comprehensive corrosion & cleaning solutions backed by global expertise!

For nearly 50 years, ZERUST® has been a leader in corrosion solution products, starting with its pioneering VCI film packaging. We offer a wide range of solutions including wash fluids and rust preventatives, all designed to work in synergy for comprehensive corrosion control. Supported by expert technical services, we tailor corrosion management programs to meet individual customer needs. With on-site support in over 70 countries, choosing ZERUST® gives customers peace of mind.

HEAT TREAT | 2023

FLOOR PLAN



HEAT TREAT EXHIBITOR LIST

BOOTH	COMPANY
2024	Across USA
2219	AFC Holcroft
1830	AFFRI, Inc.
2020	Air Products and Chemicals, Inc.
1924	Airflow Sciences Corporation
2137	Ajax Tocco
2047	Alcon Industries, Inc.
1725	ALD Vacuum Technologies North America, Inc.
2231	Allegheny Alloy, Inc.
1506	Allied High Tech Products, Inc.
1619	Alloy Engineering
1945	Americarb Inc.
1415	AMPP: Association for Materials Protection and Performance
1412	ASM Materials Education Foundation
2030	BASF Temperature Sensing
2045	Bluewater Thermal Solutions
1513	Bodycote
1637	C3 Data, LLC
1511	Calor Makine Sanayi Ticaret A.Ş.
2207	Can-Eng Furnaces International Ltd.
1913	Carbon Composites, Inc.
2044	Cast Alloy Products
2050	CCEWOOL Thermomax Inc.
2026	CEC Furnaces
1823	Chiz Bros: Refractory and Insulation Specialists



1728	Cleveland Electric Laboratories, Inc.
2029	Codina
1603	Combustion 911
1746	CompuTherm
1622	Contour Hardening
1828	Control Concepts Inc.
1927	Cooley Wire Products
1722	Dante Solutions, Inc.
1613	Dry Coolers Inc.
1837	DuBois Chemicals/Heatbath
1926	Ebatco
1717	ECM USA Inc.
2132	Edwards Vacuum
2218	ENRX
2121	Equipment Controls Company
1609	Eurotherm by Schneider Electric
1929	Fluid Dynamics
1744	Fluidtherm Technology
2117	Fluxtrol Inc.
1524	Fort Wayne Metals
1928	Gasbarre Thermal Processing Systems
1516	Gatan Inc.
2032	Gefran, Inc.
1901	GeoCorp, Inc.
1724	Graphite Machining, Inc.
1841	Graphite Materials GmbH



2144	Heat Treat Furnaces (a TTX Company)
2146	Heat Treat Today
1832	Hebei Shinning Metals Co., Ltd.
2228	HEMO GmbH
1833	High Temperature Concept
1936	Honeywell
2135	Hubbard-Hall
1518	HZO
2025	Idemitsu Lubricants America
1944	IHI Machinery and Furnace Co., Ltd.
1734	Induction Tooling
1701	Inductotherm Group
1538	Industrial Heating Equipment Association
1544	INEX Incorporated
2128	Ion Heat S.A.S
2200	Ipsen
1809	ITC - International Technical Ceramics
1731	Iva Schmetz GmbH
2201	Jackson Transformer
1410	Journal of Thermal Spray Technology (JTST)
1940	JUMO Process Control, Inc.
1710	Kowalski Heat Treating Company
2031	L&L Special Furnace Co., Inc.
1541	LECO Corporation
2204	Leybold USA, Inc.
1630	Lincotek
1827	Lindberg/MPH
2239	Linde

1645	Magnatherm Alloys
1917	McDanel Advanced Ceramic Technologies
1919	McLaughlin Services LLC
1916	Mersen USA Greenville-MI Corp.
1835	Metallurgical High Vacuum Corp
2134	Moffitt Corporation
1537	MTS Systems Corporation
1509	Nanoscience Instruments
1816	Nel Hydrogen
2123	Nippon Kornmeyer Carbon Group
2138	Nitrex
1631	North American Cronite
1935	Noxmat Industrial Heating Technology
1526	NSL Analytical Services
1840	Olstrad Engineering Corporation
1824	Optris Infrared Sensing, LLC
1839	Palmer Wahl Instruments, Inc.
1922	Pfeiffer Vacuum Inc.
1625	Phoenix™ LLC
1525	Physical Electronics
1505	Polycontrols Technologies Inc.
1736	Premier Furnace Specialists/Beavermatic
2125	Pro-Tech Company Inc.
2037	Protection Controls, Inc.
1408	Proto Manufacturing
1732	PVA TePla America LLC
2242	Pyromaitre Inc.
2046	Pyrometer, LLC
1416	Qingao Heatech Insulation Materials Co., Ltd.

2006	Quaker Houghton
1627	Qual-Fab, Inc.
1723	QuesTek Innovations LLC
1829	Rockford Combustion
1621	Rolled Alloys
2233	RoMan Manufacturing
2206	Rubig Industrial Furnaces
2232	Safechem Europe GmbH
2222	Sajjan LLC
2027	SBS Corporation
2040	Schunk Carbon Technology, LLC
1708	Schwing Technologies
1504	SciAps Inc.
2019	Scientific Forming Technologies Corp.
2101	Seco/Vacuum Technologies
1918	Seco/Warwick Corp.
1937	Selas Heat Technology
1740	SGL Carbon
2017	Signature Vacuum Systems
1706	Simplex Metals LTD
2021	SMS-Elotherm
2213	Solar Manufacturing
1726	South Tek Systems
1512	Springer
2229	Stack Metallurgical Services
1515	Steelhead Technologies
1931	Steeltech LLC
2107	Sun-Tec Corporation
1817	Super Systems



1801	Surface Combustion
1502	Synergy Additive Manufacturing
2131	TAV Vacuum Furnaces / Furnacare Inc.
1405	Ted Pella, Inc.
1807	Televac/The Fredericks Company
1923	Tenova Inc.
2238	Thermal Processing
1527	Thermcraft, Inc.
1520	Thermo Fisher Scientific
1601	Thermo-Calc Software Inc.
1752	Total Materia AG
1845	Tucker Induction Systems
2145	Ultraflex Power Technologies Corp.
1517	United Technical Inc.
1617	Upton Industries, Inc., A Kolene Company
2130	Vac Aero International Inc.
1818	Verder Scientific, Inc.
2244	Verichek Technical Services, Inc.
2141	Vesco - A Company of the Busch Group
1530	Weldaloy Metallurgical Laboratory
2127	Williams Industrial Service
2039	Wirco Inc.
1825	Wisconsin Oven
1925	WS Thermal Process Technology Inc.
1844	Yuasa International
1500	Zeiss Industrial Quality Solutions
1536	Zircar Ceramics, Inc.
2034	Zircar Refractory Composites, Inc.

INDEX OF EXHIBITORS



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CUTTING TOOLS, WORKHOLDING AND RELATED PRODUCTS

Arbors and Chucks

Euro-Tech Corp.	3216
Gear Resource Technologies, Inc.	2906
Hainbuch America Corp.	3013
Hydra-Lock Corporation	2519
Toolink Engineering Inc.	2526

Broaches

Ash Gear & Supply	3518
Broach Masters/Universal Gear Co.	3606
Broaching Machine Specialties	3533
DTR Corporation	2716
Ever Sharp Tools	3805
Forst Technology Americas LLC	2828
Forst Technology Americas LLC	2928
HobSource Inc.	2905
Horn USA, Inc.	3322
Coolants/Cutting & Quenching Oils	
Blaser Swisslube, Inc.	3416
Cumi America Inc.	3519
Oelheld U.S., Inc.	3422

Cutting Tools

Ash Gear & Supply	3518
DTR Corporation	2716
Forst Technology Americas LLC	2828
Forst Technology Americas LLC	2928
Gleason Corporation	2308
Horn USA, Inc.	3322
Index Technologies Inc.	3804

Leistritz Advanced Technologies Corporation	3816
Russell, Holbrook & Henderson	2616
Star SU, LLC	3209
Toolink Engineering Inc.	2526

Diamond Dressing Tools

Cumi America Inc.	3519
Kapp Group	3200
Norton/Saint-Gobain	3813
Reishauer Corporation	2622
S.L. Munson & Co.	2610

Gear Rolling Dies

Profiroll Technologies USA, INC.	3619
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Grinding Wheels

Cumi America Inc.	3519
Helios Gear Products	3609
Norton/Saint-Gobain	3813
Reishauer Corporation	2622
Rotec Tools Ltd.	3522
S.L. Munson & Co.	2610
Weiler Abrasives Group	3801

Hob Sharpeners

Adelbert Haas LLC	3626
Cumi America Inc.	3519
Index Technologies Inc.	3804
Jainex Aamcol Ltd	3117
Russell, Holbrook & Henderson	2616

Hobs

Ash Gear & Supply	3518
DTR Corporation	2716
Ever Sharp Tools	3805
Helios Gear Products	3609
HobSource Inc.	2905
Jainex Aamcol Ltd	3117
Rotec Tools Ltd.	3522
Russell, Holbrook & Henderson	2616
Star SU, LLC	3209

Honing Dressing Tools

Cumi America Inc.	3519
S.L. Munson & Co.	2610

Honing Wheels

DVS Technology America	2600, 2805
Helios Gear Products	3609
S.L. Munson & Co.	2610

Milling Cutters

Ash Gear & Supply	3518
DTR Corporation	2716
Ever Sharp Tools	3805
HobSource Inc.	2905
Horn USA, Inc.	3322
Jainex Aamcol Ltd	3117
Russell, Holbrook & Henderson	2616
Star SU, LLC	3209

Precision Mandrels

Hainbuch America Corp.	3013
Hydra-Lock Corporation	2519

Rack Type Cutters

Jainex Aamcol Ltd	3117
Star SU, LLC	3209

Shaper Cutters

Ash Gear & Supply	3518
Broach Masters/Universal Gear Co.	3606
DTR Corporation	2716
Helios Gear Products	3609
HobSource Inc.	2905
Index Technologies Inc.	3804
Russell, Holbrook & Henderson	2616
Star SU, LLC	3209

Shavers

HobSource Inc.	2905
Star SU, LLC	3209

Thread Cutting Tools

Horn USA, Inc.	3322
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Tooling Supplies

Gear Resource Technologies, Inc.	2906
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Workholding Devices

Euro-Tech Corp.	3216
Gear Resource Technologies, Inc.	2906



Gleason Corporation	2308
Hainbuch America Corp.	3013
Hydra-Lock Corporation	2519
Reishauer Corporation	2622
S.L. Munson & Co.	2610
Toolink Engineering Inc.	2526

GEAR MATERIALS

Bar Stock

Scot Forge	3222
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Ductile Cast Iron

The Estell Group LLC	2422
Hymark International Inc.	2434

Forgings

Canton Drop Forge	3623
The Estell Group LLC	2422
FOC Cisco	3124
IMT Forge	2419
McInnes Rolled Rings	2516
Ramkrishna Forgings Ltd	3413
Razzaq Engineering Works	3815
Scot Forge	3222
Viking Forge, LLC	2907
Walker Forge, Inc.	2917

Gear Blanks

The Estell Group LLC	2422
FOC Cisco	3124
IMT Forge	2419
Kupral S.p.a.	2423
McInnes Rolled Rings	2516
Ramkrishna Forgings Ltd.	3413
Romax Technology Hexagon	2817
Scot Forge	3222
Sinoria Electrical Machinery Co., Ltd.	3735
Walker Forge, Inc.	2917

Near Net Forgings

FOC Cisco	3124
McInnes Rolled Rings	2516
Ramkrishna Forgings Ltd	3413
Scot Forge	3222
The Estell Group LLC	2422
Viking Forge, LLC	2907
Walker Forge, Inc.	2917

Plastics/Polymer Gears

Hymark International Inc.	2434
Nichiei Co. Ltd.	3028

Powder Metal Gears

Capstan Atlantic	2413
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Weldments

Scot Forge	3222
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GEAR PRODUCTS

Bevel Gears

CGI, Inc.	2606
Croix Gear	3219
Delta Gear	3016
Gleason Corporation	2308
IMT Forge	2419
Klingelberg America	3426
Philadelphia Gear, Power Systems by Timken	3622
Power Transmission Group	3126
United Gear & Assembly, Inc.	2919
Want Win Precision Co., Ltd.	3717
WELTER Zahnrad GmbH	2728
Yager Gear Enterprise Co., Ltd.	2536

Bevel Gears - Spiral, Hypoid, Zerol

Bevel Gears India Pvt. Ltd.	3616
Circle Gear and Machine Company	2417
Croix Gear	3219
Delta Gear	3016
Great Taiwan Gear Ltd.	2617
Razzaq Engineering Works	3815
Shanthi Gears Ltd	2319
WELTER Zahnrad GmbH	2728
Yager Gear Enterprise Co., Ltd.	2536

Bevel Gears - Straight

Bevel Gears India Pvt. Ltd.	3616
Croix Gear	3219
Gear Motions, Inc.	2619
Quality Gears	3818
Shanthi Gears Ltd	2319

Couplings

Croix Gear	3219
Doppler Gear Company	2726
Flender Corporation	3022
Sinoria Electrical Machinery Co., Ltd.	3735

Custom/Prototype Gears

Bomatec International Corp	3524
CGI, Inc.	2606
Chun Yeh Gear Co., Ltd.	2936
Dana Incorporated	3532
Doppler Gear Company	2726
Forest City Gear Company	2809
Nichiei Co. Ltd.	3028
Power Transmission Group	3126
Seoam Machinery Industry Co., Ltd.	2336
Shanthi Gears Ltd	2319
United Gear & Assembly, Inc.	2919
Want Win Precision Co., Ltd.	3717
WELTER Zahnrad GmbH	2728

Double Helical Gears

Capstan Atlantic	2413
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Philadelphia Gear, Power Systems by Timken	3622
Shanthi Gears Ltd	2319

Face Gears

WELTER Zahnrad GmbH	2728
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Fine Pitch Gears

Ancon Gear & Instrument Corporation	2524
Bevel Gears India Pvt. Ltd.	3616
Brelie Gear Co.	2807
CGI, Inc.	2606
Forest City Gear Company	2809
Great Taiwan Gear Ltd.	2617
Nichiei Co. Ltd.	3028

Ground Gears

Columbia Gear Corporation	2522
Delta Gear	3016
Forest City Gear Company	2809
Gear Motions, Inc.	2619
IPM, Inc.	3122
Omni Gear & Machine Corp.	3716
Riley Gear Corporation	2513
Schafer Industries	2826
Shanthi Gears Ltd	2319
WELTER Zahnrad GmbH	2728

Helical Gears

Ancon Gear & Instrument Corporation	2524
Brelie Gear Co.	2807
Capstan Atlantic	2413
CGI, Inc.	2606
Chun Yeh Gear Co., Ltd.	2936
Circle Gear and Machine Company	2417
Croix Gear	3219
Flender Corporation	3022
Forest City Gear Company	2809
Gear Motions, Inc.	2619
Great Taiwan Gear Ltd.	2617
IPM, Inc.	3122
Leistritz Advanced Technologies Corporation	3816
Omni Gear & Machine Corp.	3716
PMG Indiana	3832
Power Transmission Group	3126
Romax Technology Hexagon	2817
Schafer Industries	2826
Seoam Machinery Industry Co., Ltd.	2336
Shanthi Gears Ltd	2319
Want Win Precision Co., Ltd.	3717
WELTER Zahnrad GmbH	2728

Herringbone Gears

Shanthi Gears Ltd	2319
WELTER Zahnrad GmbH	2728

Internal Gears

Ancon Gear & Instrument Corporation 2524	
CGI, Inc.	2606
Cincinnati Gearing Systems	3213
Croix Gear	3219
Delta Gear	3016
Gear Motions, Inc.	2619
Omni Gear & Machine Corp.	3716
PMG Indiana	3832
Riley Gear Corporation	2513
Romax Technology Hexagon	2817
Schafer Industries	2826

Internal Splines

CGI, Inc.	2606
Croix Gear	3219
Doppler Gear Company	2726

Master Gears

Broach Masters/Universal Gear Co. 3606	
Euro-Tech Corp.	3216
Ever Sharp Tools	3805

Planetary Gears

Brelie Gear Co.	2807
CGI, Inc.	2606
Cincinnati Gearing Systems	3213
Dana Incorporated	3532
Flender Corporation	3022
Gear Motions, Inc.	2619
Great Taiwan Gear Ltd.	2617
IPM, Inc.	3122
Philadelphia Gear, Power Systems by Timken	3622
PMG Indiana	3832
Razzaq Engineering Works	3815
Romax Technology Hexagon	2817
Schafer Industries	2826
Shanthi Gears Ltd	2319

Plastic Gears

Nichiei Co. Ltd.	3028
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Powder Metal Gears

Capstan Atlantic	2413
PMG Indiana	3832

PT Parts/Components

Shanthi Gears Ltd	2319
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Pump Gears

Delta Gear	3016
Gear Motions, Inc.	2619
IPM, Inc.	3122
PMG Indiana	3832
Riley Gear Corporation	2513

Racks

Quality Gears	3818
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Splines/Shafts

Croix Gear	3219
Doppler Gear Company	2726
Ernst Grob AG	3010
Gear Motions, Inc.	2619
Quality Gears	3818
Ramkrishna Forgings Ltd	3413
Seoam Machinery Industry Co., Ltd. 2336	
United Gear & Assembly, Inc.	2919
Want Win Precision Co., Ltd.	3717

Sprockets

Capstan Atlantic	2413
Gear Motions, Inc.	2619
IMT Forge	2419
PMG Indiana	3832
Quality Gears	3818

Spur Gears

Ancon Gear & Instrument Corporation 2524	
Brelie Gear Co.	2807
Chun Yeh Gear Co., Ltd.	2936
Circle Gear and Machine Company	2417
Columbia Gear Corporation	2522
Croix Gear	3219
Gear Motions, Inc.	2619
IMT Forge	2419
IPM, Inc.	3122
Omni Gear & Machine Corp.	3716
PMG Indiana	3832
Power Transmission Group	3126
Quality Gears	3818
Romax Technology Hexagon	2817
Seoam Machinery Industry Co., Ltd. 2336	
Want Win Precision Co., Ltd.	3717
WELTER Zahnrad GmbH	2728

Wind Turbine Components

Canton Drop Forge	3623
Flender Corporation	3022
Klingelberg America	3426
Razzaq Engineering Works	3815
Seoam Machinery Industry Co., Ltd. 2336	

Worms and Worm Gears

Brelie Gear Co.	2807
CGI, Inc.	2606
Chun Yeh Gear Co., Ltd.	2936
Croix Gear	3219
The Estell Group LLC	2422
Forest City Gear Company	2809
Kupral S.p.a.	2423

Leistriz Advanced Technologies Corporation	3816
Omni Gear & Machine Corp.	3716
Power Transmission Group	3126
Schafer Industries	2826
Shanthi Gears Ltd	2319
WELTER Zahnrad GmbH	2728

GEARBOXES/ENCLOSED DRIVES

Custom Built Gearboxes

CGI, Inc.	2606
Chun Yeh Gear Co., Ltd.	2936
Cincinnati Gearing Systems	3213
Circle Gear and Machine Company	2417
Dana Incorporated	3532
Delta Gear	3016
Flender Corporation	3022
Great Taiwan Gear Ltd.	2617
Philadelphia Gear, Power Systems by Timken	3622
Riley Gear Corporation	2513

Electric Geared Motors

Delta Gear	3016
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Gearheads

Ancon Gear & Instrument Corporation 2524	
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Gearboxes, Helical/Bevel

Columbia Gear Corporation	2522
Dana Incorporated	3532
Flender Corporation	3022
Hangzhou Yuhuang Transmission Equipment Co., Ltd.	2436
Philadelphia Gear, Power Systems by Timken	3622
Romax Technology Hexagon	2817
Sinoria Electrical Machinery Co., Ltd. 3735	

High Speed - Pitch Line Velocity > 35 m/sec (6,890 ft/min)

Cincinnati Gearing Systems	3213
Romax Technology Hexagon	2817

Multispeed Gearboxes

Flender Corporation	3022
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Parallel Shaft (Over 10kW) > 13.4hp

Flender Corporation	3022
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Planetary and Epicyclic Drives

Cincinnati Gearing Systems	3213
Flender Corporation	3022
Romax Technology Hexagon	2817

Transmissions

Delta Gear	3016
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Razzaq Engineering Works 3815
TIDC India - Rombo Chains 2319

Worm (Over 10kW) > 13.4hp

WELTER Zahnrad GmbH 2728

MACHINE TOOLS

Axial Spline Forming

Profiroll Technologies USA, Inc. 3619

Bevel Gear Machines

ANCA CNC Machines 3232
Gibbs Machinery Company 3107
Klingelberg America 3426
Piselli Enterprises inc 3600
Rotec Tools Ltd. 3522

Broaching Machines

Broaching Machine Specialties 3533
Forst Technology Americas LLC 2828, 2928

Nidec Machine Tool America, LLC2300
Ramkrishna Forgings Ltd 3413

Chamfering and Deburring Machines

Cleveland Deburring Machine Company 3424
Creative Automation Inc. 3617
EMAG LLC 2813
Helios Gear Products 3609
Star SU, LLC 3209
Toolink Engineering Inc. 2526
Weiler Abrasives Group 3801

Coolant Filtration Systems

Hoffmann Filter Corporation 2613
Oelheld U.S., Inc. 3422

Cutter Inspection and Setting

Klingelberg America 3426

Finishing Equipment

Cleveland Deburring Machine Company 3424
Engineered Abrasives 2313
Klingelberg America 3426
Nagel Precision Inc. 3516
OTEC Precision Finish 2316
Palmary America 3603
REM Surface Engineering 2820
Sinto America 3420
Weiler Abrasives Group 3801
WFL Millturn Technologies 3419

Grinding Machines

Adelbert Haas LLC 3626
ANCA CNC Machines 3232
Bourn & Koch Inc. 3005
DVS Technology America 2805

DVS Technology America 2600
EMAG LLC 2813
Erwin Junker Machinery Inc. 3632
Fanuc America Corporation 3116
Gibbs Machinery Company 3107
GMTA German Machine Tools of America 3217
Kapp Group 3200
Klingelberg America 3426
Liebherr Gear Technology, Inc. 2800
Machine Tool Builders Inc. 3206
Nagel Precision Inc. 3516
Nidec Machine Tool America, LLC2300
Norton/Saint-Gobain 3813
Palmary America 3603
Piselli Enterprises inc 3600
Reishauer Corporation 2622
WFL Millturn Technologies 3419

Hobbing Machines

Bourn & Koch Inc. 3005
EMAG LLC 2813
Gibbs Machinery Company 3107
GMTA German Machine Tools of America 3217
Helios Gear Products 3609
Lake Shore Machinery Sales Inc 3826
Liebherr Gear Technology, Inc. 2800
Machine Tool Builders Inc. 3206
Nidec Machine Tool America, LLC2300
Piselli Enterprises inc 3600
Ramkrishna Forgings Ltd 3413
Reishauer Corporation 2622
Rotec Tools Ltd. 3522
Star SU, LLC 3209
WFL Millturn Technologies 3419

Honing Machines

DVS Technology America 2600, 2805
Nagel Precision Inc. 3516
OTEC Precision Finish 2316
WFL Millturn Technologies 3419

Keyseaters

Leistritz Advanced Technologies Corporation 3816

Lapping/Testing

Klingelberg America 3426
Yager Gear Enterprise Co., Ltd. 2536

Machine Accessories

TEC - Materials Testing 2918

Measurement

Dontyne Systems Limited 3019
Helios Gear Products 3609
Kapp Group 3200
Klingelberg America 3426
Liebherr Gear Technology, Inc. 2800

Stresstech Inc 2317
Wenzel America Ltd. 2926
WFL Millturn Technologies 3419

Metal Processing

Engineered Abrasives 2313
Fanuc America Corporation 3116
Preco, LLC 2315
REM Surface Engineering 2820
WFL Millturn Technologies 3419

Milling

EMAG LLC 2813
Lake Shore Machinery Sales Inc 3826
Palmary America 3603
WFL Millturn Technologies 3419

Parts Washing

ADF Systems Ltd. 3722
Zerust Corrosion Solutions 3418

Rebuilding

Bourn & Koch Inc. 3005
Broaching Machine Specialties 3533
Machine Tool Builders Inc. 3206
Piselli Enterprises Inc. 3600

Recontrol/Retrofit

Bourn & Koch Inc. 3005
Machine Tool Builders Inc. 3206

Robotic Equipment

Cleveland Deburring Machine Company 3424
Creative Automation Inc. 3617
Fanuc America Corporation 3116

Shaping

Bourn & Koch Inc. 3005
EMAG LLC 2813
Liebherr Gear Technology, Inc. 2800
Machine Tool Builders Inc. 3206
Nidec Machine Tool America, LLC2300
Piselli Enterprises Inc. 3600

Shaving

EMAG LLC 2813
Nidec Machine Tool America, LLC2300
Piselli Enterprises Inc. 3600

Spline Rolling

Ernst Grob AG 3010
Euro-Tech Corp. 3216
Palmary America 3603
Piselli Enterprises inc 3600
Profiroll Technologies USA, Inc. 3619
Ramkrishna Forgings Ltd 3413

Spline Rolling Rack

Profiroll Technologies USA, Inc. 3619

Stick Blade Grinding

Adelbert Haas LLC 3626

Thread Cutting

Lake Shore Machinery Sales Inc 3826
Leistritz Advanced Technologies Corporation 3816

Thread Grinding

Adelbert Haas LLC 3626
ANCA CNC Machines 3232
Erwin Junker Machinery Inc. 3632
GMTA German Machine Tools of America 3217
Norton/Saint-Gobain 3813
Weiler Abrasives Group 3801

Tool Sharpening Machines

ANCA CNC Machines 3232
Helios Gear Products 3609
Index Technologies Inc. 3804
Star SU, LLC 3209

Tooling and Attachments

Horn USA, Inc. 3322
Klingelberg America 3426

Turning Machines

DVS Technology America 2600, 2805
EMAG LLC 2813
GMTA German Machine Tools of America 3217
Lake Shore Machinery Sales Inc 3826
WFL Millturn Technologies 3419

Used Machinery

Gibbs Machinery Company 3107
Piselli Enterprises inc 3600

Worm Milling Machines

Lake Shore Machinery Sales Inc 3826

Worm Grinding Machines

Adelbert Haas LLC 3626
Erwin Junker Machinery Inc. 3632
Norton/Saint-Gobain 3813
Weiler Abrasives Group 3801

OTHER PRODUCTS

Automation

ANCA CNC Machines 3232
Cleveland Deburring Machine Company 3424
Creative Automation Inc. 3617
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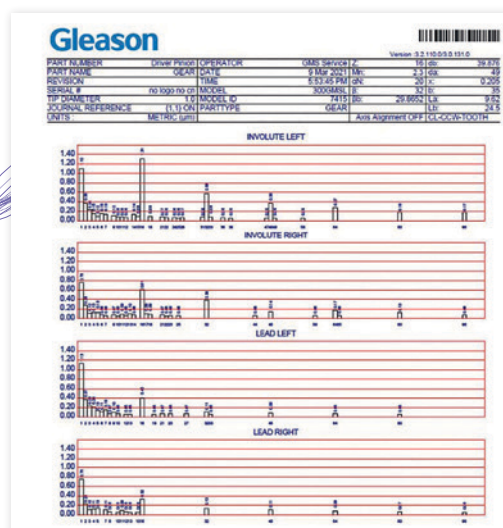
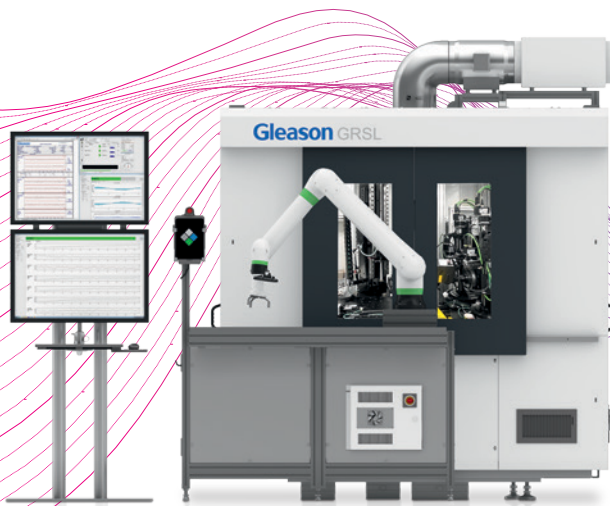


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