

# Motion + Power Technology Expo 2019 Booth Previews

## What to Expect from Power Transmission Exhibitors in Detroit

Alex Cannella, Associate Editor

**MPT Expo takes place October 15-17 at TCF CENTER (formerly the Cobo Center) in Detroit. Here are booth previews of some of the exhibitors most relevant to buyers of mechanical power transmission components.**

## American Gear Manufacturers Association

**BOOTH 3426**

The American Gear Manufacturers Association will be in the center of the inaugural Motion + Power Technology Expo (MPT Expo). Everyone is invited to the booth where people can discuss not only the thought process behind the all-inclusive show but the future direction of the power transmission industry. You can direct questions to AGMA's staff or board about standards, education, emerging technology, membership, committees and the strategy that AGMA and its members are using to move the future.



And although they want everyone to stop by their booth, AGMA encourages attendees and exhibitors to walk the entire show floor to see all the new and different companies that have come to showcase their importance in our industry. With the new Fluid Power Pavilion, the Emerging Technology Pavilion and 250 exhibitors — including over 50 new companies — attendees will be connected to the top manufacturers, suppliers, buyers and experts in the mechanical and gear power, electric power and fluid power industries. This is the place where you can do real business.

When attendees and exhibitors need a break from making deals, AGMA highly encourages them to take an educational seminar, attend a Fall Technical Meeting session or sign up for the new Motion + Power Technology Conference (MPT Conference), where they will learn from the experts. Whether you are new to the business and want to take the



“Basics of Gearing” course or are looking to expand your knowledge by taking the “Fundamental Understanding of Electro Fluid Power Technology” class, there is something for everyone across all industries. Not an engineer or operator? That is okay, the two-track MPT Conference boasts presentations from leaders on cybersecurity, IIoT, workforce, supply chain management, 3D printing, automation, economics and more. These development tools make taking that extra person an easy choice when you can check off training for the year in just three days.

Everyone knows that historically, this tradeshow (the former Gear Expo) has always had some incredible networking opportunities and MPT Expo is no different. Some of the best deals, the greatest connections and future business is done off the show floor over food and drinks. Join AGMA, NFPA and ASM International during the evening hours for some fun. There is the FTM Fun and Games Reception on Monday night, Opening Night Welcome Reception (come hang out at AGMA's booth for this) on Tuesday, the new Young Professionals Reception also on Tuesday night, the Heat is On event Wednesday night (for a taste of Detroit) and the new Women in Manufacturing Breakfast opened to all on Thursday morning. Trade shows are unique because you can do business face-to-face, make sure to make the most of it by coming to the networking events too.

With emerging technology, a global supply chain and steep competition, change is rapidly occurring in manufacturing. Motion + Power Technology Expo is not just a tradeshow but a strategy for the future. Industries all over the world are teaming up to offer a consolidated platform where customers can get all their needs in one place. AGMA and its partners thought it was time to have a show that represents all



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power transmission sectors: mechanical, electric and fluid power. Make sure to come by and share your thoughts on the future of our industry. See you in Detroit!

**For more information:**

American Gear Manufacturers Association  
Phone: (703) 684-0211  
[www.agma.org](http://www.agma.org)

## Bevel Gears India

**BOOTH 4210**

Bevel Gears India Pvt Ltd has been manufacturing bevel gears and bevel gearboxes for over 40 years. The range of bevel gears, from 0.40" to over 70", is broad by international standards and serves several industries. They also manufacture a select range of fine pitch spur, helical and worm gears.

The bevel gear expertise has broadened over the years from custom gearing to include stock bevel gears and standard cube bevel gearboxes.

The stock bevel gear program is offered in both metric and imperial versions. Customers can select from ground or lapped spiral bevels, ground or lapped zerols and soft or hardened straight bevel gears. Customization of stock products is an option to provide more flexibility.

Bevel gearboxes are available in standard ratios and sizes with the option to customize gear ratios, gearbox mounting requirements or housing materials for demanding applications. For power dense applications, Bevel Gears India provides customers with high ratio hypoid gears with very high single stage reductions. Their engineering department will be glad to review your requirements.

Applications range include medical, robotics, packaging, positioning to name a few. They invite you to visit them at the MPT Expo and learn how they could be your gear and gearbox sourcing solution.

**For more information:**

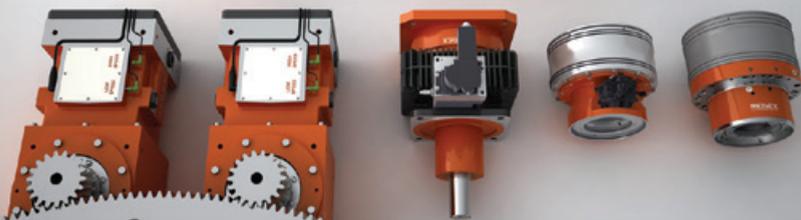
Bevel Gears India  
Phone: +91 80 2841 0239  
[www.bevelgearsindia.com](http://www.bevelgearsindia.com)

## Circle Gear

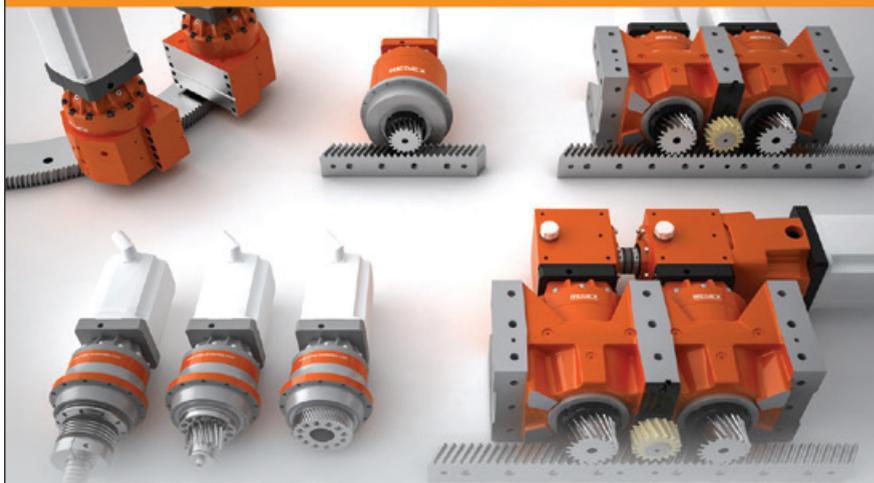
**BOOTH 4318**

Circle Gear is a leader in quality custom gearing, specializing in small to medium lot production. They 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 and spiral up to 36" diameter), spur gears, helical gears, herringbones (up to 60" diameter), internals, racks, sprockets, worm and worm gears and all other types of power transmission products. Circle provides servicing on splines (involute and straight-sided, internal and external). They 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. They also house a full service gearbox rebuild division, QRS (Qual-

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ity Reducer Service). QRS specializes in rebuilds of all major brands of gear reducers as well as manufacturing of custom designed units.

**For more information:**  
Circle Gear and Machine Company  
Phone: (800) 637-9335  
[www.circlegear.com](http://www.circlegear.com)

## Forest City Gear

**BOOTH 3418**

Forest City Gear is a family-owned and operated business and has been in the gear manufacturing industry since 1955. Industries across the globe have placed their trust in Forest City Gear and their ability to do what others can't. Every day they manufacture custom gears across a diverse array of industries covering an equally diverse range of applications. These applications span land, sea, air and space. Forest City Gear was chosen to produce all the gears and splines in the Mars Rover where failure simply wasn't an option. Forest City also regularly supports everything from telescopes, artificial elbows, aircraft, automotive, racing, medical implants, industrial equipment, marine applications and more. Be assured that when your gears made at Forest City arrive on your dock, they will not just meet your expectations; they will exceed it.

If you'd like to learn more of what they can do for your organization, contact them to arrange a "walk through the forest," where you can tour their plant and see for yourself the difference a Forest City Gear will make in your application.

**For more information:**  
Forest City Gear  
Phone: (815) 623-2168  
[www.forestcitygear.com](http://www.forestcitygear.com)

## FVA

**BOOTH 4237**

The FVA-Workbench is a manufacturer-neutral software solution for the modeling, parameterization, and calculation of transmission systems. It bundles more than 50 years of research and development from the FVA (German Research Association for Drive Technology) expert network into a

single platform and makes this accumulated knowledge directly available for practical application

This unique software includes the latest results from the FVA research network—new calculation methods for fast, precise results. Thanks to powerful performance and intuitive operation, the new FVA-Workbench is easy to use and accelerates development processes significantly. Individual gearbox components and complete systems can be developed in the shortest time possible.



**For more information:**  
FVA GmbH  
Phone: +49 69 6603-1663  
[www.fva-service.de](http://www.fva-service.de)



# The Power of One<sup>2</sup>

### Your Objective:

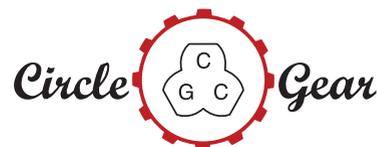
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**Partnering with QualityReducer to provide Gearbox repair, rebuilding and reverse-engineering.**

## Gleason/KISSsoft

BOOTH 3400

At this year's MPT show, Gleason Corporation will showcase a wide array of new design, manufacturing and inspection technologies for cylindrical and bevel gears. Highlights include: Closed Loop Hard Finishing Cell with integrated In-Process Laser Measuring, Gear Noise Detection and Analysis Systems, new Chamfer Hobbing Tech-

nology, and the latest release of KISSsoft Transmission Design Software.

The market leader will demonstrate the current KISSsoft Release 2019 with numerous new highlights: Among other things, KISSdesign, an instrument that allows intuitive concept design at system level, is now available. SKF and KISSsoft have also created a new interface to simplify the



gear development process. This interface enables engineers to perform calculations using the latest bearing data from SKF via a direct connection to the SKF cloud. The manufacturability for Power Skiving can now also be evaluated in KISSsoft. After generating a special report with workpiece and tool data, this report can be transferred to Gleason if required, which makes data exchange between the designer and the tool supplier much easier and less error-prone.

The interface between GEMS and KISSsoft provides an exchange of gear and system information between the two software packages. This allows the user to realistically evaluate and optimize every type of bevel and hypoid gear — with a closed loop between the design and manufacturing software.

### For more information:

KISSsoft AG  
Phone: +41 55 254 20 53  
[www.kisssoft.ch](http://www.kisssoft.ch)

## GWJ

BOOTH 3934

Focusing on mechanical engineering, GWJ Technology stands for high-quality products and professional software development for mechanical engineering to support engineers and designers in their daily work. GWJ's product range of innovative calculation software is wide — from standard software for classical machine elements with 3D CAD integration modules to the determination of whole systems up to a complex special software for 5-axis milling of gears. There are common features that all GWJ solutions share — intuitive design, a sleek interface, ease of use and suitable ap-

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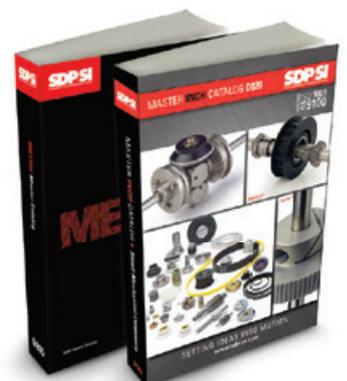
## GET COMPONENT OPTIONS AND DESIGN SOLUTIONS

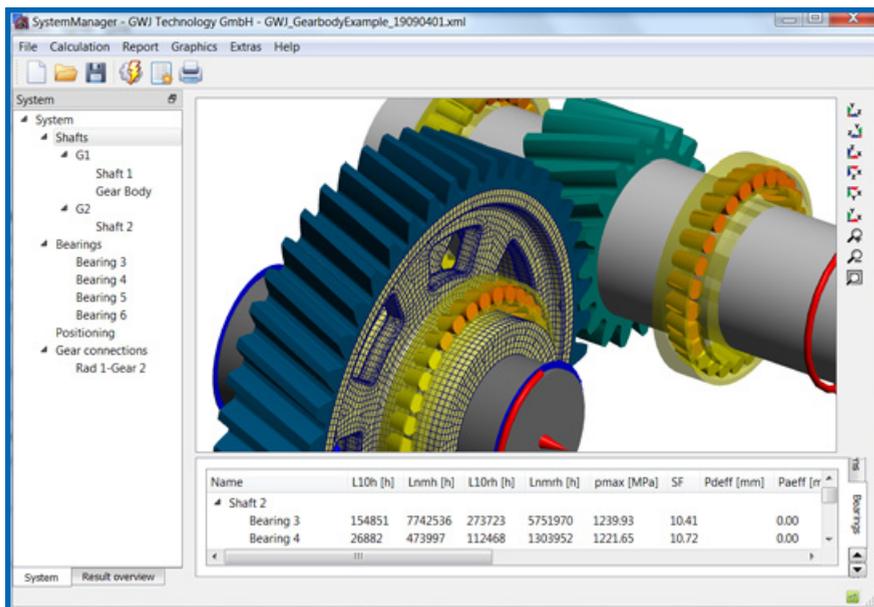
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plications for all users from beginner to very advanced. GWJ is constantly working on software enhancements and adding new features to the system in order to keep the applications up-to-date. They are also committed to providing high-quality customer services, including engineering services

and workshops. Several of GWJ's various software suites will be on display.

At the Motion+Power Technology Expo, GWJ will introduce a lot of new features. For example, a new and enhanced calculation for cylindrical gear pairs. The new version now supports the strength calculation of plastic

gears. Ultra-clean steels and plastic materials were also added to the material database. In addition, the profile modifications can be dimensioned and the user gets recommendations for the flank modifications. The definition of load spectra has been extended and new options for the dimensioning of the profile shift coefficients were integrated. A calculation with a fixed center distance independently of the profile shift sum is also available. Additionally, the calculation of the load capacity according to AGMA has been updated.

Furthermore, a new calculation module for Hirth coupling will be introduced. Besides the generation of several gears and shafts, the 3D CAD plugins offer the possibility to import shaft geometries in the calculation.

There is also a new version of the SystemManager software. The new version provides multiple enhancements that make the life of engineers easier than ever before. For example, the support of 3D elastic gear bodies and 3D elastic bearing rings, the import of background graphics of shafts, the import of shaft geometries such as 2D DXF, 3D STEP or the direct link between the face load coefficient with load capacity calculation with the load spectrum, extended parameter variation, new diagram functions, template file directory, periodic gear forces in the harmonic response, advanced results for planetary gear trains, and updated bearing database for SKF and Schaeffler (INA/FAG) bearings or the new exchange format REXS for the data exchange of systems between different software solutions like Bearinx, SystemManager and, in the future, e.g. multiple-body simulation tools.

During the exhibition, GWJ will give insight into the new calculation module for face gears, a part of the special software GearEngineer. With all these new features in place, GWJ Technology will underpin its global market position for professional tools to calculate gears and gearboxes.

**For more information:**

GWJ  
Phone: +49 531-129 399 0  
[www.gwj.de](http://www.gwj.de)

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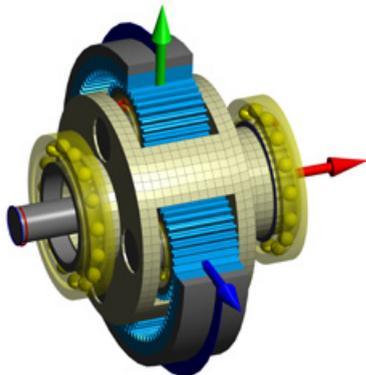
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## Mesys

BOOTH 3933

Mesys will show new features of its shaft system calculation version 07/2019. The fully coupled system calculation has new features in its FEA integration which allows elastic gear bodies and elastic bearing rings in addition to elastic housings, shafts and planet carriers. In the latest version centrifugal expansion and contact for elastic bearing rings were added.



Harmonic response can now be calculated using periodic displacements in addition to periodic forces. One use case is the calculation of dynamic gear forces based on transmission error. Another use case is considering a base excitation from the housing.

The parameter variation has a new optimization step allowing to maximize or minimize parameters based on multiple constraints. This can be used to let the software calculate maximum permissible forces for example.

The REXS data exchange format version 1.1 allows to exchange data with other CAE programs.

Bearing databases with catalog data from Schaeffler and SKF were updated, several databases for spindle bearings including internal geometry are available on request from GMN, IBC, CSC and HQW.

**For more information:**

Mesys  
Phone: +41 44 455-6800  
[www.mesys.ag](http://www.mesys.ag)

## McInnes Rolled Rings

BOOTH 2922

McInnes Rolled Rings specializes in seamless rolled rings from 4"-144" diameter and forged discs up to 54" diameter in carbon, alloy and stainless steel. Their ISO 9001, AS9100 and 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.

**For more information:**

Mesys  
Phone: (800) 569-1420  
[www.mcinnrolledrings.com](http://www.mcinnrolledrings.com)

## Napoleon Engineering Services

BOOTH 3620

Napoleon Engineering Services (NES) specializes in custom bearing manufacturing. NES is the largest independent bearing inspection and testing facility in North America. Their goal is to empower you with specialized bearing solutions related to custom bearing manufacturing, inspection and testing.

Many of the benefits to NES's bearing solutions include: corrosion resistance, temperature extremes, load extremes, high fatigue life, high life materials, cost effective solutions, bearing size range of 20-350 mm, shorter lead times, small production runs, high precision capabilities, advanced design technologies, over 100 years combined application experience and engineering knowledge,



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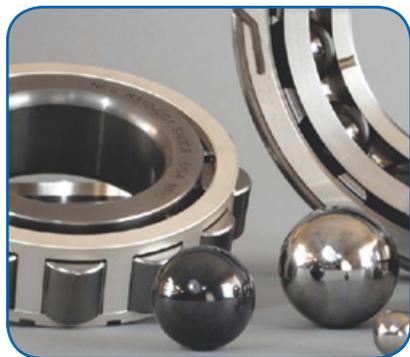
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NES is the creator of inspection and testing programs supporting global bearing sourcing and bearing qualification. They have been leading OEMs through the global bearing qualification process for 22 years. They provide technical information through bearing inspection, modeling and testing programs to evaluate bearing design, manufacturing capability, overall quality of workmanship and the relationship these attributes have to bearing life. No other source has the experience, capacity or capability to expertly service your bearing qualification needs.

Industries and applications include: aerospace, defense, oil and gas, power generation, marine, industrial, transportation, gear drives, medical, food processing, agriculture, pumps/turbines, generators and off-highway. NES's certifications include: ISO 9001:2015, AS9100D and NADCAP Chemical Processing.

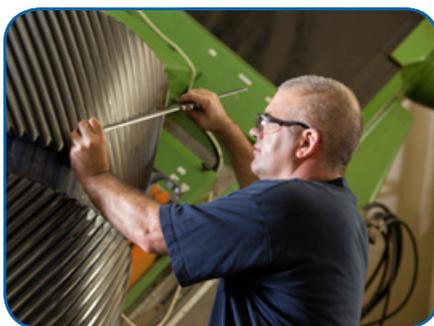
#### For more information:

Napoleon Engineering Services  
Phone: (877) 870-3200  
[www.nesbearings.com](http://www.nesbearings.com)

## Philadelphia Gear

BOOTH 4033

Philadelphia Gear and other experts that are a part of the Timken Power Systems team join forces at the Motion and Power Technology Expo to feature seven brands that combine to provide an entire industrial drivetrain solution. Drawing on a global pool of engineering expertise and technological advancements, Timken Power Systems provides end-users with a single trusted source for comprehensive electro-mechanical equipment support. From designing custom control systems to gearbox expertise to comprehensive bearing repair solutions, they can maximize your powertrain and rotating equipment's reliability and performance.



Through a network of independently ISO-certified regional service and manufacturing centers, they focus on providing local expertise at a national level to minimize your downtime and reduce your cost of repair.

#### For more information:

Philadelphia Gear, a Timken Brand  
Phone: (800) 766-5120  
[www.philagear.com](http://www.philagear.com)

## Power Transmission Engineering and Gear Technology

BOOTH 3826

Take part in the live version of our Ask the Expert column!

GEAR TECHNOLOGY and POWER TRANSMISSION ENGINEERING are proud to offer four sessions of our popular ASK THE EXPERT column, live and in-person. We've lined up a number of high-profile experts to answer your questions at our booth. So bring your toughest gear-related technical challenges to Booth #3826, and we'll get your questions answered.

There will be four sessions at our booth, with appropriate experts sitting on the panel in each session:

There will be four sessions at our booth:

- GEAR MANUFACTURING — Tuesday, October 15, 10:30 a.m. — featuring Dr. Hermann J. Stadfeld of Gleason, Dr. Hartmuth Mueller of Klingelnberg, Dr. Andreas Mehr of Liebherr and Tom Ware of Star SU.
- GEAR DESIGN — Tuesday, October 15, 2:30 p.m. — featuring Chuck Schultz of Beyta Gear Services, Dr. Karsten Stahl of the Gear Research Center (FZG) at the Technical University of Munich, and Frank Uherek of Rexnord.





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- **LUBRICATION** — Wednesday, October 16, 10:30 a.m. — featuring Thomas Tobie of the Gear Research Center (FZG) at the Technical University of Munich, Sib Hamid of Lubriplate and Paul Conley of SKF
- **BEARINGS** — Wednesday, October 16, 2:30 p.m. — featuring Chris Napoleon of Napoleon Engineering Services, Jitesh Modi of Schaeffler, George Lutzow of SKF and Mike Allega of Timken.

Come to the booth and ask our experts your toughest questions! Or just sit in the audience and absorb the knowledge!

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!

## Thors

### BOOTH 2928

Your organization must make decisions every day, and the quality, speed and accuracy of those decisions are directly impacted by the knowledge a company possesses.

Thors provides your team with the technical information they need to make the best decisions for your organization; works with you to create a learning path that addresses your knowledge gaps; and objectively measure the knowledge gained by every user so you can understand the ROI of the program.

They have worked with industry experts to capture their knowledge and put it into engaging interactive gear courses. Here is a small portion of what their gear courses can help you do: recognize what gears are, why they are used and why they are important for both power transmission and motion control; understand how to read a gear chart; apply the proper techniques to correct the most common manufacturing errors; recognize the different types of spur and helical gears; and describe the gear metal cutting and forming processes.

The following courses are available from Thors's library: Engineering Drawings for Spur Helical Gears, Gear Manufacturing: Bevel and Hypoid Gears, Gear Manufacturing: Spur and Helical Gears, Gears: Cylindrical Gear

Manufacturing Troubleshooting, Gears: Spur and Helical Gear Terminology [2nd Ed.], Gears: Bevel and Hypoid Gear Terminology [2nd Ed.], Gear Chart Interpretation: Elemental Measurements on Cylindrical Gears [2nd Ed.], Gear Classification and Terminology: Worm and Worm Wheels, Gear Fundamentals [2nd Ed.] and Gear Manufacturing: Worm and Worm Wheels

#### For more information:

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