

Power Transmission Suppliers Converge at AGMA's MPT Expo

St. Louis plays host to the leading suppliers in mechanical power transmission, September 13–16

Randy Stott, Publisher & Editor-in-Chief

Motion + Power Technology Expo will take place in September at the America's Center Convention Complex in St. Louis. More than 120 companies will exhibit at the show, including many leading suppliers of gears, gear drives, bearings and other mechanical components. To help you navigate the show, we've put together this preview of companies most relevant to *Power Transmission Engineering* readers.

motionpowerexpo.com.

Ancon Gear & Instrument Corporation – Booth 2107

www.ancongear.com

Highest Quality Manufactured Precision Gears!

Ancon Gear is a second-generation family owned manufacturing facility. They supply some of the world's top companies with precision gears and machined products. They use the most modern manufacturing techniques and equipment available, such as cellular manufacturing and CNC hobbing/shaping, to ensure the highest quality product leaves their 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 them.

ASCO Sintering Co. – Booth 2027

www.ascosintering.com

ASCO Sintering Co., based in Los Angeles and having subsidiaries also in the **United Kingdom** and **South Africa**, specializes in complex, custom, high quality **Powdered Metal Sintering** solutions. ASCO utilizes advanced proprietary gear technology and high strength material that results in cost effective savings against CNC machining or MIM solutions. The company produces over 16 million gears annually, mainly in the automotive industry. The company is ISO 9001:2015 accredited, and all components produced conform to CE and ATEX standards. ASCO is an employee-owned company and an industry leader with over 35 design of excellence annual awards, since 1965 to date. Production capabilities and services include: Tool design, Metallurgical laboratory, Resin impregnation, Vibratory de-burring, Plating, Destructive torque, Tension/compression testing and Resonant non-destructive testing. Industries served include: Medical, Aerospace/Defence, Automotive, Advanced lock hardware, Irrigation, Fluid Power couplings, Military & Computer Hardware.

Berliss Bearing Co. – Booth 3421

berliss.com

Berliss Companies, established in 1932, is a fourth generation family owned business that manufactures and distributes roller bearings, mechanical seals and custom engineered bearing and products. In addition, Berliss is now an authorized distributor for INA, FAG, KBC, Nachi, IKO and FYH.



Bevel Gears India Pvt. Ltd. – Booth 2420

Bevel Gears (India) – The Bevel Gear Specialists!

www.bevelgearsindia.com

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, zero bevels, angular bevels and hypoids.

Customers are invited to learn more about the company's capabilities, decades of experience, Gleason CAGE prepared summaries, 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 modelling
- CNC gear measuring services
- Stock bevel gears including ground spiral and zerols – imperial and metric
- 5-axis machining

Brelie Gear Co. – Booth 3520

www.breliegear.com

Brelie Gear is a full-service gear manufacturer, specializing in fine- and medium-pitch spur and helical gears, worms, worm gears, and worm shafts. They offer gear crowning and carbide re-hobbing to improve gear quality and reduce gearbox noise. Components are produced using state-of-the-art Koepfer and Mitsubishi hobbing equipment. This equipment, along with the company's ISO 9001 registered systems, allows them to produce gears up to AGMA 12. In addition to the company's gearing capabilities, they also offer complete in-house turning and machining capabilities. Please give them a call to discuss your gearing and machining requirements.

Bunting-DuBois – Booth 2013

bunting-dubois.com

Bunting provides Total Magnetic Solutions for your industry. Their experienced team of specialized magnetics engineers and state-of-the-art manufacturing facility allows them to



deliver their customers custom magnets and magnetic assemblies. They supply all types of permanent magnet materials and offer rapid prototyping, stringent quality control, and high-volume production. At Bunting, the staff are committed to providing custom magnets and magnetic assemblies engineered to meet your exact needs.

Capstan Atlantic – Booth 2430

Capstan Atlantic – The Powdered Metal Gear Specialists
capstanatlantic.com

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. Their process allows the customer to achieve original design tolerances, improved dimensional accuracy and reduced wear and noise characteristics while maintaining a cost advantage. They can produce AGMA class Q9 quality gears with their process.

CGI, Inc. – Booth 3529

www.cgimotion.com

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.

Cincinnati Gearing Systems – Booth 1907

www.cincinnatigearingsystems.com

Founding American Gear Manufacturers Association member Cincinnati Gearing Systems Inc. (CGS) announces a series of facility improvements and additional machines in response to new contracts and to meet ever increasing demand for precision gear manufacturing and design engineering.



CGS component gears and enclosed drives are manufactured, assembled and tested by a skilled workforce in Cincinnati, OH. CGS products support a variety of applications such as automotive drive gearing, diesel engine gearing, military and commercial marine propulsion, turbine powered generator drives, wind energy, pump drives and expander/compressor drives. CGS is ISO 9001:2015 and IATF 16949:2016 certified.

CGS assembly and test facility improvements include the installation of two 20-ton cranes with 5-ton auxiliary and one 10-ton crane. In the same facility there is a new dedicated full load test cell supported by a 1,500 hp motor.

Within the last two years, Cincinnati Gearing Systems has purchased 7 additional machines:

- Kapp-Niles gear grinder offers unique tooling for grinding double helical gears with limited clearance between the gear faces.
- Liebherr CNC shaper cutter doubles current cutting speeds and has laser apex alignment, increasing gear quality. This shaper cutter is capable of cutting tapered splines and any helix angle without the need for additional tooling.
- Höfler Porta internal and external gear grinder; The OD/ID grinding wheel finishes grind diameters and thrust faces in the same setup as tooth grinding, combining three separate machine operations into one.

Other machines recently installed include a Hyundai horizontal boring mill, Hyundai vertical mill, Hyundai CNC turning center and a Gleason GMS gear analyzer.

Machining Capabilities:

- Turning 1"-106"
- Hobbing and Shaping .5"-149"
- OD Grinding .75"-138"

- ID Grinding .5"-134"
- Tooth Grinding 16 DP-.75 DP (2"-130")
- Milling Up to 200"

Co-located with CGS is Cincinnati Steel Treating, a full service, fast and efficient heat treating source for all industries. CST offers a full line of facilities for atmosphere carburizing and/or hardening, carbonitriding, press quenching, induction and flame hardening. Their capabilities extend to gas nitriding and ferritic nitrocarburizing (FNC) with some of the largest furnaces in the mid-west. They process aluminum, tool steels, stainless steels and high temperature alloys. They also offer normalizing, annealing, stress relieving and sub-zero treating. Ancillary processes include straightening, both mechanical and thermal, along with blast cleaning. They offer metallurgical consultation and free local pick up and delivery. CST takes pride in the quality and efficiency of the work we provide for our customers.

Improvements to CGS's testing, assembly and manufacturing facilities have significantly increased capacity and production process flow while decreasing lead time. Established in 1907, visit Cincinnati Gearing Systems in Booth #1907 to see how CGS's in-house engineering, manufacturing, assembly and testing and heat-treating services can support your future gear and gearbox needs.

Circle Gear and Machine Company – Booth 3429

www.circlegear.com

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

Columbia Gear Corporation – Booth 2230

Columbia Gear Corporation – Your custom gear supplier!

www.columbiagear.com

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. They are continually adapting to today's customer needs. They continually analyze manufacturing processes, build upon proven design solutions, streamline production and assembly schedules — always taking ground gearing quality to higher levels. Conveniently located in Central Minnesota, their facility encompasses 235,000 sq. ft.

Croix Gear – Booth 2831

Precision gears from a partner committed to your success.

www.croixgear.com

Take the risk out of your loose gear supply chain. Visit Croix Gear & Machining at Booth 2831 and compare notes on your supply chain experience and what they have learned from their collaboration with supply chain leaders.



From agriculture to warehouse automation, OEMs around the country rely on Croix Gear & Machining to keep their assembly lines running at maximum efficiency. Their manufacturing facility is outfitted with a vast array of the latest in high-performance machining, gear cutting, and inspection equipment, and their quality management system is certified to ISO 9001:2015.

By collaborating with a structured approach, they can help optimize the loose gear supply chain and protect your reputation.

Doppler Gear Company – Booth 2825

www.dopplergear.com

Doppler Gear has over 50 years of experience in custom gear manufacturing. Our four manufacturing facilities in the upper Mid-West United States of America 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. Our equipment can produce a wide range of products. Depending on type and configuration, our capabilities range from 120 Diametral Pitch and 0.100" diameter to 2 Diametral Pitch and 36" in diameter, and from .25 module and 2.5 mm to 12 module and 900 mm. We also specialize in spline shafts and internal spline hubs and couplers. We welcome the opportunity to review your requirements!

Elgeti Engineering GmbH – Booth 2725

www.elgeti-engineering.com

Elgeti Engineering is an independent engineering company with HQ in Germany and a branch in Indiana.

Their 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

Forest City Gear Company – Booth 2513

Forest City Gear welcomes you to the 2021 Gear Expo!

www.forestcitygear.com

Forest City Gear is a family-owned and operated business in the gear manufacturing industry since 1955. They manufacture custom gears across a diverse array of industries covering a wide range of applications. Forest City Gear was chosen to produce all the gears and splines in the Mars Rover, where failure simply wasn't an option. They support gears for telescopes, artificial elbows, aircraft, automotive, racing, medical implants, industrial equipment, marine applications, and more.

Gear Motions/Kinatech – Booth 2425

garmotions.com

Gear Motions is a leading gear manufacturer specializing in supplying custom cut and precision ground gears for OEMs all around the world. Kinatech is a new mechanical locking system that will hold any load in place without using electricity, pneumatics, hydraulics, friction, or any other external braking system. Together, we bring you the best in precision gear manufacturing and groundbreaking gearbox technology, all in one place.



Great Taiwan Gear Ltd. – Booth 2609**Welcome to Great Taiwan Gear, a leader in gear supply.**www.greattaiwangear.com

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 production of gears and gear related parts. They produce gears for automotive use, gear pumps, and other power transmissions. They also provide fine-pitch gears and gearboxes, including gearboxes with motors for wheelchairs and gearboxes for scooters.

Innovative Rack & Gear Co. – Booth 3518**WELCOME to INNOVATIVE RACK & GEAR @ Booth #3518****ONE TEAM * ONE VISION * ONE GOAL...**www.gearacks.com

Since their merger with Avers Machine, they are able to offer more capacity in gearing including bevels.

IPM, Inc. – Booth 2019www.ipminc.com

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

Napoleon Engineering Services – Booth 2327www.nesbearings.com

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.

Philadelphia Gear, Power Systems by Timken – Booth 3532www.philagear.com

Philadelphia Gear now supplies and services the complete industrial drivetrain

Drawing on a global pool of engineering expertise and technological advancements, their 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, the key brands under Timken Power Systems help maximize your powertrain and rotating equipment's reliability and performance.

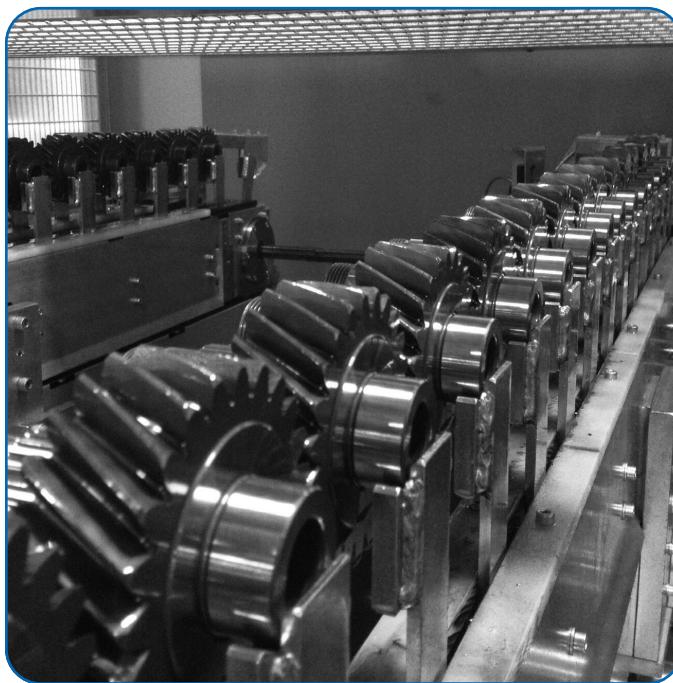
- Greater Reliability & Performance
- Advanced Technologies
- Aggregate Cost Savings Achieved with a Comprehensive Service Partner
- Comprehensive Repair, Upgrade and Service Solutions for Industrial Powertrains
- Engineering Expertise
- In-depth Knowledge Base
- Network of Regional Manufacturing and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

Riley Gear Corporation – Booth 3313

Riley Gear welcomes all participants to Motion & Power Expo.
www.rileygear.com

Riley Gear manufactures custom gearboxes and precision ground spur and helical gears. Manufacturing capabilities range from 0.25 inches to 40 inches in diameter. Their precision ground gears can meet AGMA Class Q15 or DIN 2 specifications. Precision is their 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



Their 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.

Shanhi Gears Ltd. – Booth 2130

www.shanthigears.com

Shanhi Gears is a Gearing Solutions Company. They design and manufacture Gears, Gear Boxes, Geared Motors and Gear Assemblies, using contemporary integrated manufacturing facilities spanning four decades of manufacturing excellence. They are now a part of the 5.5 Billion US\$ Murugappa group (since 2012) that has opened up enormous possibilities to explore new frontiers in technology, capabilities, product segments and markets.

Shanhi's commitment to quality has resulted in them getting the coveted AS910Dd (Aerospace) certification. They have created end-to-end manufacturing facilities to assure the highest level of quality in their Gears. Their facility includes a captive ferrous foundry capable of pouring 4000 metric tonnes of SG and Ductile Iron castings using resin sand moulding and hand moulding techniques. Shanhi is equipped with a non-ferrous foundry that is capable of producing radiography levels sound centrifugal castings of all bronze alloys. In addition, Shanhi makes its own cutting tools to assure accuracy and quality of Gears produced.

Southern Gear & Machine, Inc. – Booth 2307

Custom Precision Gears Since 1957. Veteran Owned.
www.southerngear.com

For more than 60 years, Southern Gear has been delivering the highest quality precision gears and gearboxes to the world's most demanding industries, including aerospace, defense, medical, marine and more. Southern Gear provides the ideal combination of skilled, experienced personnel and cutting-edge technology to produce precision gears, on-time and on-budget. Southern Gear is equipped to handle all gear-making operations in-house including turning, milling, grinding, and gear cutting/grinding. The benefit to customers is that their parts are produced in their plant, under their control, and under their AS9100 D certified quality systems. As a veteran-owned company in business for more than 60 years, Southern Gear is an industry leader in precision gear manufacturing. The most demanding companies serving the most demanding industries trust Southern Gear. Visit to learn how they can solve your precision gear needs.

The Estell Group LLC – Booth 2206

Bearings, castings and machined components for your success!
www.theestellgroup.com

The Estell Group supports power transmission OEMs with bearings, engineered castings, and precision machined components. They add further value by offering scrap metal value optimization services, creating transparency in an opaque market and increasing revenue for under-valued material.

Key areas of focus:

- Internationally competitive bearings, domestically stocked, including:
 - » Rolling element bearings (all styles)
 - » Plain bearings
 - » Mounted bearings

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- » Large bore taper bearings
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 - » Centrifugal cast gear rims
 - » Specialty blanks for sector gears and other unique shapes
- Machined & as-cast gray/ductile iron, ADI, steel and stainless steel castings:
 - » Automated green sand molding to $60 \times 85 \times 20/20$ inch flask size
 - » Airset molding for low volume components
- Machined & as-cast aluminum and copper alloy castings:
 - » Gravity permanent mold aluminum to 40 lb.
 - » Permanent mold bronze gear castings to 150 lb.
 - » Sand cast aluminum (automated green sand and air set) to 300+ lb.
 - » High pressure die cast Al & Zn, presses from 400 to 1750 ton.

United Gear & Assembly, Inc. – Booth 2030

United Gear and Assembly welcomes you to Gear Expo 2021!

www.ugaco.com

United Gear and Assembly offers a totally integrated supply source, including engineering, machining, and heat treating. UGA manufactures precision gears and shafts for engines, generators, transmissions and drive trains used by OEM manufacturers world-wide, including custom gear and shaft products designed to meet rigid specifications. UGA produces products that include: parallel axis gears, bevel gears, helical gears, cluster gears, splined shafts, splines, pinions, and sprockets. Heat Treating capabilities include; batch carburizing, continuous carburizing, gas nitriding, carbonitriding, induction hardening, through-hardening, normalizing, stress relieving, tempering, press quench, and a complete metallurgical laboratory. United Gear is TS16949 Certified. **PTE**

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The True Cost of Bearing Lubrication Monitoring and managing bearing lubrication today are feeling more pressure than ever to reduce costs.

Don't Tap the Glass Before a glass of unlubricated glass that stretches from wall-to-wall, ceiling-to-floor at The Path to Smarter Bearings As Hoover's Meece, Power Transmission Engineering had the opportunity to sit down with Tales from the Bearing Blog The following short articles first appeared on www.powertransmission.com. They are part of

THE DRIVE TECHNOLOGY SHOW October 2022 • Detroit • Cobo Center Solutions: Gear Making & High Performance Drives

GEAR EXPO 2019

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