American Gear Manufacturers Association®

gear TECHNOLOGY®

PTE™

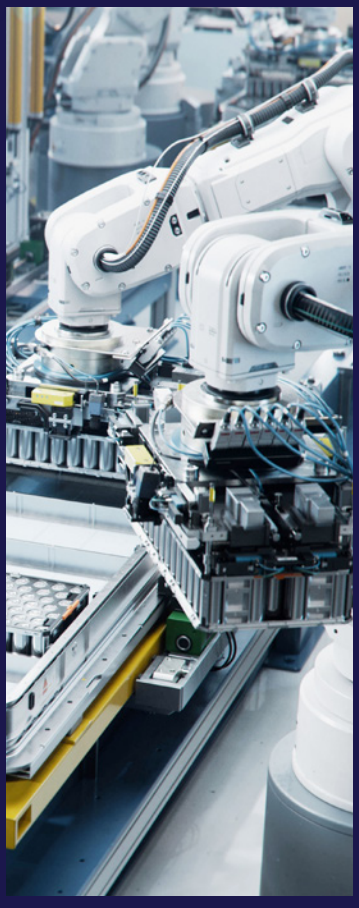
MOTION + POWER TECHNOLOGY EXPO®

October 21–23, 2025
Huntington Place • Detroit, MI

OFFICIAL SHOW GUIDE 2025 ADVERTISING OPTIONS

Expanded Booth Listings
Sponsored Content
Display Ads

MotionPowerExpo.com



INNOVATION ACCELERATED

MAKE THE MOST OF YOUR MPT EXPO PRESENCE

Exhibitors at Motion + Power Transmission (MPT) Expo 2025 in Detroit will have the opportunity to connect with the top manufacturers, suppliers, buyers and experts in the gear manufacturing, power transmission, electric drive and fluid power industries. The 2025 MPT Expo Official Show Guide is your place to stand out from the crowd by making sure that the gear and power transmission market knows about your company and your commitment to our industry.

+ Reach an anticipated 3,000+ in the printed show guide, which will be distributed to attendees.
+ Reach the entire AGMA/AGMA Media power transmission world (over 35,000 strong) in the digital edition launching early October.
+ Make sure you are seen with the complete directory of the show's exhibit halls, events and educational opportunities, along with all the maps, contact information and tips every visitor needs to make their 2025 MPT Expo trip a success.

Every exhibitor at MPT Expo will have a presence in the Show Guide, including logo, booth listings and category listings in our product guide. But we're also offering exhibitors the opportunity to enhance their presence in a number of ways:

+ **Expanded booth listings.** Need more than the standard 100-word description to let potential visitors know about all the new products and services your company is offering? No problem! You can pay for additional space (see page 3).
+ **Featured articles.** Do you want to be seen as a thought leader in the motion and power transmission space? Do you have new technology that needs a more in-depth approach? How about an application story that showcases that new technology? You can place an article in the show guide to help get the word out (see page 4 for rates and details).
+ **Display advertising.** We offer a full range of display ads in the Show Guide, from two-page spreads down to ¼ page ads (see page 5 for rates and details).

Booth Listings

Logo, up to 100 words and one photo	FREE (included with exhibit space)
Logo, up to 400 words and two photos	$599
Logo, up to 800 words and three photos	$999
Logo, up to 1,500 words and five photos	$1,399

Free listings are available for all MPT Expo exhibitors. In the months leading up to the show, all exhibitors will receive instructions on how to fill out their listings and categories. In addition, we'll be contacting all exhibitors as we get close to the show in order to make sure all listings are up to date.

Basic booth listings are limited to 100 words. If you'd like to add a more in-depth description of your products and services, you can do so for a small fee (see table, right column).

Exhibitors who are interested in reaching the gear and mechanical power transmission industry should contact Dave Friedman, *friedman@agma.org*, in order to ensure that your company will be included in the MPT Expo Show Guide. Both free and paid options are available.

NEED MORE ROOM FOR YOUR MESSAGE? HAVE A LOT OF PRODUCTS? NO PROBLEM! BOOTH LISTINGS CAN BE UPGRADED WITH ADDITIONAL TEXT AND PHOTOS

STANDARD BOOTH LISTINGS ARE INCLUDED FOR FREE TO ALL MPT EXPO EXHIBITORS.
YOU GET YOUR LOGO, UP TO 100 WORDS AND ONE PHOTO (OPTIONAL).

Sponsored Content

The Show Guide will include feature articles and information about the latest technology being shown at MPT Expo. You can make sure your story is included by placing a sponsored content article. Each page of content allows for approximately 700 words of text and 1–2 photos (JPG or TIFF format/300 dpi).

+ First page—$1,350
+ Each additional page—$350

MPT Show Guide Sponsored Content

Kapp Niles
Booth #3303

Increasing Energy Efficiency through Improved Gear Surfaces in e-Mobility

By Patrick Dulva and José López

The electric motors used in e-mobility have a significantly higher efficiency compared to conventional combustion engines: up to 90 percent of the energy stored in the battery is transferred to the wheels as kinetic energy by the highly efficient electric motors by means of a transmission. When burning fossil fuels, the yield of 30 to 40 percent is only about half.

Nevertheless, efforts are underway to further increase the energy efficiency of electric cars, especially regarding the achievable ranges. A key element is also the surface texture of the gear flanks in the transmissions used.

The process which determines the quality is the hard finishing of gears through grinding and subsequent superfinishing at the end of the gear processing chain. There are constantly increasing demands on service life, smooth running, power transmission and efficient use of the introduced energy.

Since there is no official definition for the terms of fine grinding and polishing, Kapp Niles has created a definition that refers to the achievable surface quality during generating grinding (table 1).

Table 1: Kinematic process profiles	
Method of generating grind	Achievable surface quality
Conventional Generating grinding	Rz<3µm / Ra<0.3µm
Fine grinding	Rz1 - 3µm / Ra0.2 - 0.6µm
Polish grinding	Rz<1µm / Ra<0.05µm

The average roughness depth R_z and the average roughness height R_a were used as comparative values. However, it is understood that from certain surface qualities onwards, other values such as material ratios are better for characterizing the surface than R_z and R_a.

In order to meet the increasing surface requirements, various tools are also used in the different processes, as described below.

Conventional generating grinding

In standard generating grinding, a vitrified bonded corundum grinding worm, consisting entirely of one specific

Fine grinding

In the multi-stage, combined machining process of superfinishing, a different grinding worm specification is used for rough grinding (conventional generating grinding) than in the actual fine grinding. Both specifications include a vitrified bonding but may have different types of corundum and/or grain sizes.

Polish grinding

In the multi-stage, combined machining process of polishing, a grinding worm with vitrified bonding is used for rough grinding (conventional generating grinding) and a grinding worm with a polyurethane or synthetic resin bonding for polishing.

In a one-step machining process of polishing (not in combination with direct rough grinding), a one-piece tool with polyurethane or synthetic resin bonding is used.

Fine grinding

The tool consists of two different tool specifications. In the area used for fine grinding, the lead spoud is reduced during dressing (Fig. 1). This makes it possible to influence the achievable surface quality of the workpiece. The procedure for

dressing influences the surface quality of the gear wheel, even if the grinding worm consists of only a single specification.

In the following images, profile and flank line measurements are each shown before and after fine grinding. It is already apparent in the profile measurement log of the gearing measurement

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MPT Show Guide Sponsored Content

AFC-Holcroft
Booth #1827

When it comes to the manufacturing of complex automotive components such as gears, controlling distortion is a difficult, but necessary consideration for reducing the post-heat treat grinding process as well as reducing material cost, because the less you grind the more you save in material and time.

There are opportunities using various heat-treating processes to help reduce distortion and thereby reduce overall grinding time, resulting in lower manufacturing costs and improvements in overall quality—but where are those opportunities? What is the best choice for your gear manufacturing operation?

At AFC-Holcroft, we believe that the use of molten salt during the quench portion of the heat-treating process, such as can be found in our UBQA ("Universal Batch Quench—Austemper") System, can be an effective, safe and environmentally-friendly solution to help overcome the problem of part distortion resulting in the quench process.

Molten salts have been in use as a quenching medium for decades. Quenching in molten salt is an ideal way to minimize distortion in parts with challenging geometries while also allowing for processes that oil quenching cannot support, such as austempering, carbo austempering and ADI where the bainitic and ausferritic micro-structures achieved in various materials offer properties that are growing in demand, especially in the engineering drive for the lightweighting of automotive components. This is because of the wider operating temperature range that molten salt offers over oil.

Quenching in molten salt is considerably different from quenching in oil, water or polymer. With most liquid quenchants, heat extraction occurs throughout the three stages or phases of vapor, boiling and convection. Quenching in salt is a single-phase quenching process with no vapor phase and so the issues and problems associated with the vapor phase are avoided. Most of the heat extraction occurs by the process of conduction combined with convection, resulting in minimized distortion of the part while achieving a more uniform hardness.

Furthermore, quenching in molten salt offers other benefits such as the elimination of the fire and fumes associated with quenching in oil. With molten salt, parts can easily be cleaned in warm water without the need for detergents, oil skimmers and oil disposal procedures. Quenching in salt is a green process in that the salt can be reclaimed from the wash water and recycled back into the quench tank offering a huge savings in operational costs. Even the water after the salt reclamation process can be recycled back into the wash/rinse system.

Sound a little too good to be true? We've proven its effectiveness time and time again. AFC-Holcroft's UBQA furnaces offer superior quench speed and uniformity. The unique quench tank and housing design, coupled with proprietary agitation and water addition techniques, allow the UBQA to offer a wide range of quench severity levels that can be used on a part-by-part basis depending on the part's geometry, hardness requirements and need for distortion control.

Salt quench systems are playing a major role in a new generation of engines, transmission components and hybrid/EV technology. AFC-Holcroft has one of the largest install bases of salt quench systems, worldwide. Our proven designs have been adopted by major multi-national corporations across the globe, with greater acceptance than ever before. But don't just take our word for it—come visit us for at ASM Heat Treat 2021, Booth #1827, for more information.

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MOTION+POWER TECHNOLOGY EXPO

> The technology we have developed in the Kinatech device provides a rotary path for torque to flow in the positive drive direction that also incorporates a mechanism to fully lock the applied torque load through that same gearset. The technology, and thus the mechanism, uses the geartrain that carries the driving torque load as the brake mechanism, thus its non-back-drivable load limit is the same as the power capacity of the geartrain.

heat, however, causes changes in the viscosity of the lubricant, which cause changes in the effective coefficient of friction in an uncontrolled manner. Further, most mid-grade lubricants exhibit a different coefficient of friction during sliding than they do when the clutch is locked. This varying coefficient of effective friction between the two regimes are typically labeled dynamic or sliding friction, and static friction.

Clutch chatter (i.e.: chudder, shutter or shudder) is generally attributed to this very dynamic, almost stepwise, change in system response, especially as the rotational between the input and output come close to zero. Chatter can be very detrimental to either the load-holding and position control system and/or the load itself. Chatter is also very hard on internal components as it manifests itself large magnitude, high frequency vibration and the possibility of catastrophic failure and loss of load control.

The other common method to hold two rotating components together is the positive latch which does not rely on friction, but on a latch engaging one of the rotating components. If not done properly, the engagement places a great deal of shock loading on the latch and can cause it to break catastrophically or wear down the mating surface quickly. Latches have been used in many products; a simple latch and eyehook to hold a gate or door shut is an example. However, if there is any load on

the door (such wind) then it is difficult to get the latch to line-up with the eyehook.

Neither of these two technologies provided the operational characteristics we are looking for. What we really need is to not separate the load-driving mechanism (in our example, the geartrain) from the motion-control mechanism. The technology we have developed in the Kinatech device provides a rotary path for torque to flow in the positive drive direction that also incorporates a mechanism to fully lock the applied torque load through that same gearset. The technology, and thus the mechanism, uses the geartrain that carries the driving torque load as the brake mechanism, thus its non-back-drivable load limit is the same as the power capacity of the geartrain.

It is based on the kinematic relationship of the driving geartrain to also lock the main power-path gears, thus the two components attached to those gears, to move and lock without any friction interface to wear or change characteristic responses over time or without any latch component that can fail in shock loading. Input of motion comes from the driver of the system (i.e. a motor or other source rotational energy). This input causes an unlock, which in turn allows rotation based on the input rotational speed of the driver. As part of the design and packaging, these mechanisms can also include a ratio as a function of common gear design considerations.

This aspect of the technology presents an interesting attribute of function that none of the other locking mechanisms have. In a friction-based device, the rate at which a load is slowed to a controlled stop is a function of the capacity of the friction interface, which means over time, changes in that interface cause the response characteristics of the friction device to change. Further, it is difficult to provide the user a consistent response or to integrate a control system that compensates for the time-varying response. The latching technology affords no control over slowing down the motion of the load. It can only hold the load once the system has caused it to stop moving (and the latching system is engaged).

In comparison, our patented technology uses the rotational speed of the drive motor as the control input to the load. This means as the drive motor slows, the Kinatech device slows the load in a controlled manner based on its ratio. When the drive

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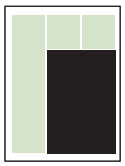
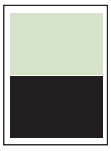
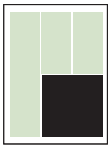
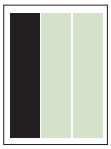
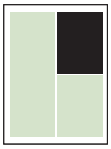
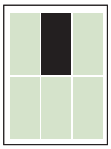
Display Advertising

Don't forget to support your exhibit with additional promotional opportunities in *Gear Technology* and *Power Transmission Engineering*, both in print and online. Turn your MPT Expo Exhibit into a full-blown marketing campaign by adding:

+ Print ads in *Gear Technology* (August and Sept/Oct 2025 issues)
+ Print ads in *Power Transmission Engineering* (October 2025 issue)
+ Digital ads in the *GT* or *PTE* e-mail newsletter
+ Custom e-blasts
+ See 2025 Media Kit for details

Ask **Katie Mulqueen** to help you put together a show package to maximize discounts and make the most of your marketing dollars! Contact ***mulqueen@agma.org***.

RATE	ADVERTISEMENT	SIZE	
$3,600	Front Cover Corner Display Ad	3¼" × 3¼" triangle (+⅛" bleed) 82.5 × 82.5 mm	
$3,600	Belly Band (wrap)	8" × 5" (front) 8" × 5" (back)	
$3,200	2-page Spread (Bleed)	16" × 10¾" (+1/8" bleed) 406 × 273 mm	
$2,600	Premium Positions (inside front cover, inside back cover, outside back cover, Page 3, Page 5)	8" × 10¾" (+1/8" bleed) 203 × 273 mm	
$2,250	Full Page (Bleed)	8" × 10¾" (+1/8" bleed) 203 × 273 mm	
$1,500	Half-Page Island	4¾" × 7¼" 120.5 × 184 mm	
$1,350	Half-Page Horizontal	7¼" × 4¾" 184 × 120.5 mm	
$1,350	Half-Page Vertical	3½" × 9¾" 89 × 247.5 mm	
$950	One-Third Square	4¾" × 4¾" 120.5× 120.5 mm	
$950	One-Third Vertical	2¼" × 9¾" 57 × 247.5 mm	
$800	Quarter Page	3½" × 4¾" 89 × 120.5 mm	
$650	One-Sixth Page	2¼" × 4¾" 57 × 120.5 mm	

MOTION+POWER TECHNOLOGY EXPO®

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2025 MOTION+POWER TECHNOLOGY EXPO SHOW GUIDE ORDER FORM

(Deadline: September 5, 2025 for all orders AND materials)

Sold To: _____ Date: _____

Name: _____

Company: _____

Billing Address: _____

City, State: _____ Zip/Postal Code: _____

Country: _____ Phone Number: _____

E-mail: _____

Please publish the following:

Booth Listings (all listings include logo):

____ FREE! Up to 100 words and 1 photo
____ $599. Up to 400 words and two photos
____ $999. Up to 800 words and three photos
____ $1,399. Up to 1,500 words and five photos

Sponsored Content:

____ $1,350. One page-article (700 words and 1–2 photos)
____ $1,700. Two-page article (1,400 words and 3–4 photos)
____ $2,050. Three-page article (2,100 words and 5–6 photos)
____ $2,400. Four-page article (2,800 words and 7–8 photos)
____ I'd like to submit a longer article (we'll provide you with a quote after reviewing your materials)

Premium Position Display Advertising:

Premium Positions

____ $3,600. Front cover corner ad with standard full page
____ $3,600. Belly band wrap
____ $3,200. Center 2-page Spread
____ $2,600. Cover/Premium Position ad (Cover 2, 3 & 4, page 3 & 5)

Regular Display Advertising

____ $2,250. Full page
____ $1,500. Half page island
____ $1,350. Half page horizontal/vertical
____ $950. One-third page square/vertical
____ $800. One-quarter page
____ $650. One-sixth page vertical

Advertiser (Agency/Obligor) Please sign here:

Company: _____ Name/Title: _____

Signature: _____ Date: _____

This agreement is binding after final acceptance by AGMA Media and subject to the terms and conditions as noted at www.geartchnology.com/terms.pdf

For more information contact:
Katie Mulqueen, Manager, Member Engagement and Sales, *mulqueen@agma.org*, **703-838-0066**