Marposs Unveils New Retoolable Manual Bench for Gear Inspection

Marposs Corp. will introduce its new M62 OBD (over ball diameter) retoolable manual bench measuring system for checking gear shafts at Gear Expo 2005.

According to the company’s press release, the M62 OBD bench is designed to permit quick changeover to measure gears in a shop floor environment. With this bench, the part floats freely on a mechanical reference surface and can be checked in different longitudinal sections by means of simple mechanical adjustment.

In addition, the company will show its M62 DF double flank measuring system, which is designed for dynamic inspection of gears with automatic part rotation.

Gary Sicheneder, new market development manager at Marposs, says, “The M62 DF gage has one basic advantage, and that is the existence of an electronic bore gage that definitely does a better job in identifying the exact center of the gear bore. This is standard technology for Marposs. Most competitive DF [double flank] gages are supplied with expanding mandrels/arbors.”

The company has added gimbal mechanics to evaluate the typical double-flank functional parameters (Fi", fi", Fr" Aa", Nick), lead angle, lead variation and taper.

Gear inspection systems will be displayed with different electronic units, including the £9066 industrial PC and an E4N electronic column, featuring the company’s Quick SPC program with gear add-on software.

Also new is the M1 Star EBG electronic bore gage, with features like a 3–300 mm diameter measuring range, a frictionless and wear-free integrated transducer and IP67 protection against water and coolant.

New Hob Sharpener from Star Cutter

The new PTG-1 from Star Cutter Co. is a hob sharpener featuring NUM axial CNC control with digital servo motors, NUMROTO plus software, integrated automatic part probing, grinding wheel probing, and on-board wheel dressing.

According to the company’s press release, the PTG sharpens straight and spiral gash hobs, through-hole and shank type, up to 8” in diameter and 10” in length. The single-end, direct-drive grinding spindle has a 15 hp rating with maximum grinding wheel capabilities up to 8”.

Additionally, the hob sharpener is equipped with a quick-change HSK wheel pack mounting, a planetary roller head stock with a glass scale feedback and glass scales on all linear axes. The PTG-1 can also perform quick-change HSK headstock tooling for hobs, including through-hole and shank type; shaper cutters; end-milling cutters; and drills.

Coolant filtration, a delivery system and mist collection are featured as well.

Workpiece specifications for straight gash and spiral hobs with automatic part probing reach 8” by 10”. Dish and helical shaper cutter specifications are 8” in diameter.

Visit Star Cutter at Gear Expo booth #370.

For more information:
Star SU LLC
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Phone: (847) 649-1450
Fax: (847) 649-0112
E-mail: sales@star-su.com
Internet: www.star-su.com
“With a .5 micron guaranteed repeatability, we are confident this will be the best electronic bore gage available on the market,” says Sicheneder.

Other Gear Expo products include the M1 Star MBG (mechanical bore gage) that was launched in July ’04, a line of Go/No-Go gages for gear checking, the Quick Set modular bench gage for shaft type parts, new DigiCrown digital pencil probes and other manual gages and Mida spindle touch probes and laser tool setters.

Visit Marposs at Gear Expo booth #543.

For more information:
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Phone: (248) 370-0404
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New Gear Oils from Shell Lubricants

The Shell Omala, Omala HD and Tivela S gear oils from Shell Lubricants that will be introduced at Gear Expo are specially designed to prolong gear life and reduce unscheduled downtime.

The Shell Omala is a mineral-based gear oil suitable for highly loaded gearboxes operating under normal temperatures. Additional features include improved water separation properties that are critical in wet environments such as mining and steel and paper mills.

The Omala HD is a high performance synthetic oil based on poly-alpha-olefin (PAO) and other specially selected additives. Improved thermal and oxidative stability minimize sludge formation, and increased viscosity helps increase oil life and reduce maintenance costs, while its anti-wear performance offers longer gearbox life in steel-on-steel applications. This oil aims to provide low friction properties, reduce power losses and lower operating temperatures.

The Shell Tivela S is a high performance synthetic gear fluid based on polyalkelene-glycol (PAG) technology and specially selected additives designed for use in enclosed, sealed-for-life and worm-helical gear units operating at higher temperatures. In addition, the gear oil has a low friction coefficient, which leads to reduced power losses and lower energy consumption when compared to mineral oils. This thermal and oxidative stability inhibits sludge formation and viscosity variations for longer service life and reduced maintenance requirements.

Visit Shell Lubricants at Gear Expo booth #703.

For more information:
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Houston, TX 77002
Phone: (713) 546-4560
Fax: (713) 546-6675
Internet: www.shellus.com
Arrow Gear has introduced a line of curvic couplings for aircraft engines, helicopters and high precision commercial systems.

According to the company’s press release, Arrow previously focused on producing high precision gearing products, including spiral bevels, spurs, helicals and complete gearboxes.

“Arrow has had the capability of cutting curvic couplings for the past several years,” says Joe Arvin, president of Arrow Gear. “However, recent additions of specialized software and machine tools have allowed us to perform precision grinding on these products. We feel the investment of over a million dollars will translate into a significant volume of curvic coupling work for both new and existing customers,” he says.

Arrow has a Gleason Phoenix 600 on order and scheduled for delivery in the first quarter of 2006. The new Phoenix was ordered with capabilities for curvic couplings as the main requirement and will also be used for production of ground tooth spiral bevel gears.

James J. Cervinka, co-founder of Arrow Gear and chairman of the board, says this commitment to reinvestment in the company is a long-standing Arrow Gear philosophy: “This is another example of our dedication to servicing our customers and investing in the latest manufacturing technologies, which keeps us at the forefront of the competitive market.”
New Single Stroke Honing Tooling from Sunnen

The new High Performance Single Stroke Honing (HPH) Tools from Sunnen Products Co. offer fast stock removal, consistent bore geometry and can economically optimize high production applications.

The plated-diamond HPH tools are manufactured with high strength steel as opposed to the typical cast iron. In addition, all tools incorporate an expandable, superabrasive sleeve mounted on a tapered mandrel for precision bore sizing and finishing. The tools are designed so that after the final pass, the bore is accurately sized, straight and round with the desired surface texture. Water- or oil-based coolants are both acceptable for use.

The honing tools perform best on bore diameters ranging from 6.325–25.057 mm. They are compatible with Sunnen’s VSS Single Stroke System as well as models from other manufacturers.

The SV-10 Automatic Cylinder Hone will also be displayed at the company’s booth. This machine has a patented, full-bore profile display illustrating a real-time visualization of the bore’s geometry and includes a zoom feature. Operators can dwell the honing tool anywhere throughout the bore. A dwell taper can be moved to the position where the bore is visually

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Features include the ability to change gears in five minutes and run another gear.

ITW will also show its standard 3500 gear analyzer for process inspection applications at the expo.

Visit ITW Heartland at Gear Expo Booth #272.

For more information, contact:
ITW Heartland Gears
1104 Highway 27 West, Unit 4
Alexandria, MN 56308
Phone: (320) 762-8782
Fax: (320) 762-5260
E-mail: itwgears@itwgears.com
Website: www.itwgears.com

ITW’s New Burnisher

A new semi-automatic quick change-over burnishing machine from ITW Heartland Gears will debut at the company’s booth at Gear Expo.

According to Jim Pospisil, general manager at ITW, the new machine is designed for Tier I suppliers and smaller gear shops.

“We normally do high volume work. For a while, we’ve been looking at offering equipment that might fit smaller manufacturers. This should work for lower volume producers with a variety of gears to burnish,” he says.

Features include the ability to change gears in five minutes and run another gear.

ITW will also show its standard 3500 gear analyzer for process inspection applications at the expo.

Visit ITW Heartland at Gear Expo Booth #272.

For more information, contact:
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1104 Highway 27 West, Unit 4
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—Kurt Medert, AGMA VP, business management division

## ALPHABETICAL LIST OF EXHIBITORS

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- Thread gauges
- Spline gauges
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ninety percent of the savings are from gear more than 1,000 pieces, Greulich says. Providing chamfers on the gear blank, machining operations can be performed depending on job characteristics. Held to tolerances within 0.0003–0.002", flatness and squareness, he adds, can be tooling, Greulich says. The cut-off surface better squareness, flatness and surface finish rotatory saw attachment produces parts with can be reduced or eliminated, because the impact can drive cycle time down and produces very small, dustlike chips, that are strings of sharp metal, the rotary saw process is that it can typically cut faster run as many as 10 saws on a single arbor. Time, Greulich says. But the company has the same arbor. With gear blanking, it's problems for rotary saw cutting, whereas the process can become even more longer tool life and fewer tool changes 25–50% or more, Greulich says. Also, in many cases, secondary machining is wasted. At least 8–10% material cases, bar stock usage can be cut by stock is wasted. At least 8–10% material