

Exhibitors Prepare for the Biggest IMTS Ever

It's big. More than 1,400 exhibitors are expected to display the latest manufacturing technology available.

It's big. Organizers expect attendance to equal the IMTS 96 record of more than 120,000 visitors.

It's big. Exhibits will take up more than 1.4 million square feet of space.

So why would anyone in his right mind want to go to Chicago, fight the crowds and walk miles and miles through booth after booth of exhibits?

The answer is quite simple. Nowhere in the western hemisphere will you find a more complete collection of the manufacturers and suppliers of the latest in machine tools, cutting tools and services for industry.

This year's show will feature 10 pavilions focusing on areas of manufacturing technology. The pavilions include Abrasive Machining, EDM, Environmental Safety, Factory Automation, Gear Generation, Lasers, Metal Cutting, Metal Forming, Quality Assurance, and Tooling & Workholding.

In addition, SME will hold its Manufacturing '98 technical conference in conjunction with the show. The conference features over 70 one- and two-day courses and clinics on a variety of manufacturing topics.

Gear industry suppliers will be well represented at the show. For the second time, IMTS will feature a gear generation pavilion, where most of the gear machine and cutting tool manufacturers will have their booths. The following is a list of some of the booths that might be of interest to gear manufacturers.

Guide to the Booths

A.G. Davis/AA Gage (Booth E1-2332) will have on display their line of Hydra-grip hydraulic expansion arbors and chucks for gear grinding, hobbing, shaping, honing and other manufacturing operations. They will also show their line of face gear couplings.

Emuge Corporation (Booth E1-2352) is a premier manufacturer of quality workholding and electronic control systems for gear manufacture. Emuge will feature a precision clamping product line that includes arbors, chucks, diaphragm chucks, spindles, draw bars and machine operation measuring systems configured to accomplish a broad range of turning, grinding, hobbing, milling, drilling, lapping, balancing, inspection and assembly operations. Emuge's mechanical, hydraulic and mechanical/hydraulic systems achieve an excellent runout accuracy—typically .00008 to .0002—and are renowned for reliability, functionality, clamping element interchangeability and ease of maintenance. Custom application services are offered. Emuge's Web site at www.emugecorp.com outlines details.

Euro-Tech Corporation (Booth E1-2530) will show the Frenco line of gages and workholding devices, Mytec hydraulic expansion arbors and chucks and the Euro-Tech Power Block III toolholder. Frenco's product range includes extremely long-wear go/no go gages, bevel gear testing gages, completely automatic spline and cluster shaft inspection systems and a full range of clamping arbors, chucks and nests for inspection and machining applications. Mytec rupture-proof arbors and chucks are ideally suited to precision applications. Mytec arbors and chucks provide normal runouts under .00012" for grinding, hob-



bing, shaving, shaping and inspection of gears. The Power Block III mounts directly to your bench or table to make tool changes easy and risk-free. Vertical and horizontal axis allows access to the bottom of the toolholder. Either axis may be outfitted with like or different receptacles to accommodate any standard or custom toolholder tapers, including HSK.

Gleason Pfauter Hurth (Booth B1-7150) will exhibit several new products for gear manufacturing. The new Power Dry Cutting process for bevel and hypoid gears will be demonstrated on the new Gleason 175HC Power Dry Cutting machine. The 175HC will demonstrate face milling and face hobbing on bevel gears. Gleason will also premier the new 600HTL Hypoid Turbo Lapping machine for hard finishing bevel and hypoid gears. The turbo lapping process (ultra high speed) is possible due to Gleason advances in machine dynamics and compound application technology. Gleason-Pfauter will exhibit for the first time the new (16") P400G profile grinder with integrated gear measuring and integrated CNC wheel dressing. Gleason-Hurth will demonstrate the capabilities of the

SHOW FACTS



**IMTS 98
MCCORMICK PLACE,
CHICAGO, IL
SEPT. 9-16, 1998**

- 1,400+ exhibitors will fill 1.4 million square feet of space.
- Attendance is expected to equal or exceed the record of more than 120,000 set at IMTS 96.
- Registration and exhibitor information is available online at www.imts.org or by calling AMT—The Association for Manufacturing Technology at (800) 828-7469.
- SME's Manufacturing '98 technical conference will be held in conjunction with IMTS. More than 70 technical courses and clinics. Visit www.sme.org or call SME at (800) 733-4763 for more information.

ZH125 CNC spheric honing machine for hard finishing cylindrical gears using an internal abrasive honing tool. The machine will be shown with automation. Gleason and Pfauter will also exhibit, for the first time, a new joint engineering and manufacturing cooperation in machine design with a new gear manufacturing machine to be unveiled at IMTS.

Gold Star Coatings (Booth E1-2701) will feature a variety of thin film coatings.

H.B. Carbide Co. (Booth E1-2700) is a manufacturer of carbide pre-forms.

Holroyd (Booth C2-5575) will show, for the first time anywhere in the world, the TG150E thread grinder. This is a 'sister' version of the TG350E launched two years ago as the first in a planned new generation of machines. The TG150E has been specifically designed for grinding smaller components, with profiles up to 70 mm wide and less than 300 mm in diameter (the TG350E has a maximum 350 mm capacity and 110 mm profile

width). An important feature of the new machine is integrated 3D component profile measurement with automatic machine compensation to all axes. Also on display will be a range of worm gears, screw compressor rotors and other helical products manufactured by Holroyd's subcontract facility.

Kapp Sales & Service L.P. (Booth B1-6981) represents the Kapp and Niles product lines of internal and external grinding machines featuring stock dividing, on-board measuring, dressable wheels and CBN wheels for the manufacture of internal and external spur and helical gears, ball screw tracks, worms, compressor rotors, rotary pistons (root type), pump spindles (IMO type), pump rotors (gerotor type), vane pump rotors, constant velocity tracks (CVT and the like) and more.

Liebherr America (Booth B1-7170), North American representative of Sigma Pool partners Klingelnberg, Lorenz and Oerlikon, will demonstrate new gear machinery. Liebherr will demonstrate

high-speed dry hobbing with the new LC 82 CNC hobbing machine, which was developed for dry cutting with carbide and cermet tools. The LC 82 has a 3,000-rpm motor hob head and a 450-rpm table, permitting cutting speeds up to 2,000 feet/minute. Klingelnberg will demonstrate the compact Hoefler ZP 260 CNC gear inspection center designed for the shop floor. The ZP 260 takes up less than 16 square feet of floor space, but measures workpieces up to 40" diameter and 40" between centers. Oerlikon will exhibit the C28 bevel gear machine for high-volume dry machining.

M&M Precision Systems Corporation (Booth B1-7149) manufactures CNC gear manufacturing process control systems utilizing 1D, 3D and laser probe technologies. M&M's Metrology Systems group also provides CNC systems for measuring threads, turbine blades, helical rotors, scroll compressor components and a variety of other complex forms. In addition, M&M supplies a complete line of functional gaging products including double flank roll testers, D.O.P. gages, variable indicators, master gears and spline gages. M&M's Motion Systems group carries a complete line of linear and rotary components and subassemblies and brings almost 50 years of experience in the design and manufacture of standard and custom positioning systems.

Mahr Corporation (Booth D2-4437) will present metrology products for measuring gears as well as surface texture, form and length on a variety of parts. The Extramess 2000 is a new analog/digital inductive comparator accurate to .000012". The M1 and M2 are the first of a new series of surface texture measurement instruments designed for the shop floor. The Optimar 100 is a new bench-top calibration system for dial indicators, dial comparators, dial test indicators, incremental probes and LVDTs.

Mitsubishi Machine Tools (Booth A1-8242) will demonstrate its line of gear hobbers, shapers, shavers and grinders. Mitsubishi's gear shapers and hobbers have sophisticated cutting mechanisms

for high productivity shaping and hobbing of gears up to one meter in diameter. Their gear shavers can handle gears up to 450 mm diameter.

Mitsui Machine Technology Inc. (Booth A1-8733) represents Ikegai Corporation with their full line of CNC machining centers, including gear hobbing, boring, milling, turning, grinding and combination machines. MMT also will show the O-M Ltd. line of vertical CNC lathes and the Howa Machinery Co. line of vertical CNC machining centers.

National Broach (Booth B1-7490) introduces three new gear machines at IMTS 98. The NBV 5-8 is a low-cost broaching machine that was specially designed for small part broaching applications. The Red Ring Shavemaster 400 will be on display to show how you can produce high quality gears at an efficient cost. In addition, National Broach will demonstrate their CLP-35 CNC gear checking machine as well as their complete line of quality Red Ring brand tools including broach, shave cutter, hob, hone, roll form racks and master gears.

Pfauter-Maag Cutting Tools (Booth B1-7150) is a world leader in the manufacturing of hobs, shaper cutters, shaving cutters, form cutters, CBN grinding wheels, thin film coating, bevel gear tools and heat treat service. Their products are sold throughout the U.S., Mexico, Canada, Asia, Europe and South America. Pfauter-Maag features tools made of premium high speed steel as well as carbide.

Radyne (Booth C2-5364) will exhibit its Power Integrated ScanMaster line of solid state induction heating systems. The ScanMaster incorporates a 250 kW/10kHz IGBT solid state induction power source and Windows-based PC control. The scanner drive uses an AC brushless servo motor, providing some of the fastest scan speeds with the highest degree of positioning accuracy in the industry. Also featured will be the Dual Position Power Integrated Pop-Up Fixture with its integral 160 kW/30kHz IGBT solid state induction power source. This design

incorporates three positions, allowing one position to load, a second to heat, and a third to quench. In addition, Radyne will provide a hands-on demonstration of its Apex QA Quality Assurance Monitoring System. Finally, a pre-show press release suggests that "a few other surprises may be awaiting you at the Radyne booth."

Reishauer Corporation (Booth B1-7164) is demonstrating the RZ820, the

biggest machine in the Reishauer product line. It is capable of efficiently grinding large, heavy duty gears to a very high quality level. This machine replaces all previous ZB, RZ701 and RZ801 machines. The RZ820 has improved software for increased productivity and improved positioning accuracy of the shift axis, which greatly reduces idle times. Hydraulic tailstock and on-machine fine balancing of the grinding

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Since 1961 Mitsui Machine Technology has represented a number of Japan's top manufacturing companies in markets throughout North America.

technology in CNC Turning Centers, Machining Centers, Gear Hobbing, Hob Sharpening and internal Grinders. At Mitsui Machine Technology we're helping you grow - Profitability

TC/TU SERIES

CNC turning/mill-turn type from 8" to 12" chuck, CNC universal slant bed type from 8" to 24" chuck, 15 1/4" to 120" center capacity and 12 to 50 horsepower.



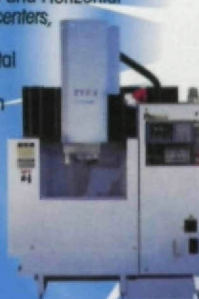
AU SERIES

Horizontal bed universal CNC type from 23" to 98" swing, 39" to 314" center capacity and up to 147Hp.



TV SERIES

CNC Vertical and Horizontal machining centers, with new U-axis for total machining capability on the most unique parts.



IGV SERIES

Vertical and Turret-Type CNC Grinders for internal and external grinding with X and Z-axis full scale closed loop control.



SX SERIES

CNC high speed production hobbing, gear form grinding and hob sharpening. Diameter capacities range from 3.93" to 15.74". All designed for high-rigidity, high-speed and user-friendly operation.



NB SERIES

CNC Horizontal Boring and Milling Machines with 37 1/8" x 41 1/8" to 98 1/2" x 118 1/2" table, Fanuc 16iMA CNC with W-axis control.



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SEE US AT IMTS BOOTH #A1-8733

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wheel are two new features that enhance throughput.

Richardson (Booth B1-7164) will display the R200 CNC high production hobs. The Richardson machine comes with a modern 6-axis control coupled with the mechanical stiffness of all cast iron and all vee way construction. It has been configured to handle high helical jobs (-45° to $+60^\circ$) that are difficult to cut on com-

petitive machines. As standard the R200 CNC can be used to mill or hob gears, and its compact design is intended to please equipment engineers.

S.L. Munson & Company (Booth B2-6555) will be displaying products from Dr. Kaiser Precision Diamond Products Company and DWII Super Abrasives. They will display a complete line of rotary diamond dressers for all gear dress-

ing applications; a new single- and double-side dresser design including an integral rotary root relieving tool for Reishauer SPA and Fässler DSA system dressing units; wear parts produced with polycrystalline diamond surfaces lapped to extremely close tolerances; CNC profiling dressers; and rotary diamond dressers for plunge form applications. DWH products include examples of vitrified CBN and vitrified diamond wheels for precision grinding applications.

Schunk Inc. (Booth E1-2471) manufactures and sells a wide range of tooling products, including hydraulic chucks, hydraulic arbors, lathe chucks, chuck jaws, FUNDO—a new hydraulic dowel pin, and TRIBOS—a revolutionary new tool-holding system. Schunk also manufactures grippers for factory automation.

Star Cutter Co. (Booth B1-7182) will display Elk Rapids Engineering CNC sharpening machines as well as its full line of cutting tools, including hobs, milling cutters, pressure coolant & non-pressure coolant drills & reamers, solid carbide tooling and PCD tooling.

SU America (Booth B2-6657) will feature a CNC gear grinding machine, which the company says is accurate, flexible and affordable. It is a form grinder that can use ceramic and/or conventional grinding wheels. It can grind internal gears as well as externals and splines, and it has the latest-generation numerical controls. SU's entire line of gear cutting tools, including carbide hobs, will also be on display. ⚙



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