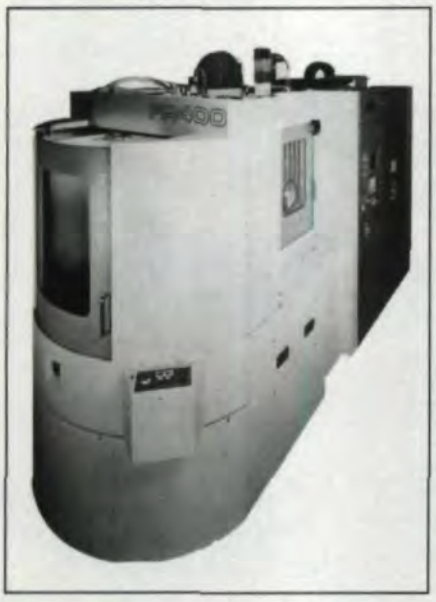
New Products

The latest in machine tools, cutting tools, and other products for gear manufacturing.



Toyoda Introduces its Smallest and Fastest Horizontal Machining Center

Toyoda Machinery USA's Cutting Machine Division has introduced its new FA400 horizontal spindle machining center. The FA400 is the smallest and fastest horizontal ever offered by Toyoda, providing a cost-effective alternative to lighter competitive machines without compromising any of the rugged construction and long-lived stability and accuracy that have become hallmarks of Toyodas.

Traverse rates of X, Y, and Z-axes are 1,969 ipm, with optional drives raising those rates to 2,835 ipm through a workcube defined by 17.72 inches (X), 17.72 inches (Y), and 23.62 inches (Z). The maximum cutting feedrate is 1,969 ipm, with acceleration to 0.34 G. The standard 20 HP spindle with its #40 Taper spindle nose provides speeds to 8,000 rpm with an exceptionally flat torque curve. Toyoda can also provide the FA400 with a 22 HP or a 30 HP spindle providing 20,000 rpm and 14,000 rpm respectively. The 15.75 x 15.75 pallets are capable of supporting 600 lbs each, are exchanged in 5 seconds, and are indexed on the table 90° in 1.5 seconds with an accuracy of +/- 3 seconds of arc. The standard magazine accommodates 40 tools and the high-speed servo-driven toolchanger provides 3-second tool changes, chip to chip. Machine control is via the Fanuc 16i CNC. For more information on the FA400, contact Toyoda's Cutting Machine Division at (847) 253-0340 or via fax at (847) 253-0540.

Circle 300

New Mitsubishi Gear Shaver with Moving Cutter Head

Mitsubishi Heavy Industries America has introduced the new Mitsubishi FC30CNC with a moving cutter head and fixed table. With the moving head generating work, more rapid cutting speeds and reduced cutting times are achieved, while the fixed table increases machining rigidity.

This economically priced gear production machine offers four user-selectable shaving processes—available at the touch of a button. Whether conventional, diagonal, plunge, or underpass cutting is required, the new FC30CNC integrates today's most popular gear cutting procedures with an extremely fast cutting tool changer. Just two or three minutes are required for a cutter change, one-third to one-fourth the time required by competitive machines. For more information on the FC30CNC Gear Shaver, contact MHI Machine Tool U.S.A., Inc., Marketing Division, 907 W. Irving Park Rd., Itasca, IL 60143-2023. (630) 860-4222, fax: (630) 860-4233.

Circle 301

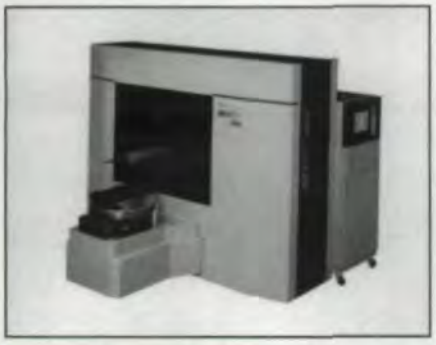
Norton SG Fibre Discs

The Norton Company has introduced a new line of Norton SG Fibre Disks designed for grinding stainless steel, silicon bronze and aluminum. The products were showcased by the Norton Company at this year's IMTS, held in September at Chicago's McCormick Place.

The unique design of the F941 fibre discs combines Norton's patented SG "seeded gel" ceramic aluminum oxide abrasive with a supersize, reactive size coating, resulting in both chemical and mechanical cutting action. The proprietary resin system chemically prepares the metal in the grinding zone for removal, enabling the SG abrasive to easily abrade the metal. F941 fibre discs have demonstrated up to 72% increased performance on 304 stainless steel com-

pared to competitive ceramic aluminum oxide discs. F941 fibre discs are available in four sizes: 4-1/2 in., 5 in., 7 in. and 9-1/8 in. with grit sizes ranging from 24–80 and a .030 fibre backing that meets stringent quality specifications for strength and performance. For more information contact Linda Lebel, Norton Company, (508) 795-2168 or by fax at (508) 795-4130.

Circle 302

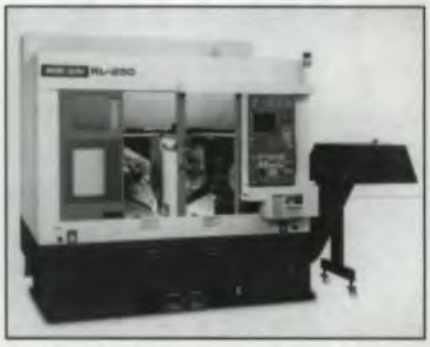


New Inline CMMs from Mitutoyo

Mitutoyo has unveiled an all new family of shop floor CMMs to address the need for more efficient metal cutting operations. The MACH family of CMMs delivers the speed and durability of an ultra-high speed horizontal machining center with the accuracy of a stand-alone CMM. And, open communications links with machine tools and factory networks offer increased levels of machine tool utilization. MACH CMMs offer a complete package of measurement hardware and software in a seamless approach to long term, continuous quality control and higher spindle utilization.

All structural elements of MACH CMMs are steel, giving common coefficients of expansion. High stiffness allows three point mounting for easy installation and reconfiguration. Linear motion is accomplished using mechanical bearing guideways and precision ball screws driven by oversized AC motors with AC digital servo controllers. A fixed horizontal arm is guided in the same fashion to eliminate the droop found in other ram-type configurations. Even the linear scales are steel with a very fine resolution of .000004" (0.1 µm). The advanced Mitutoyo CNC features four Digital Signal Processors (DSPs) and a 250 microsecond position loop. This combination of mechanics and servo system yields 3D acceleration of 1.8 G (695"/s^2) and a velocity of 70"/sec. Extremely high probing speed of 1.15"/sec., almost four times the industry norm of .26"/sec. is possible using Mitutoyo's unique MTP 1000 probe. For more information contact MTI Corporation at (630) 820-9666 or by fax at (630) 820-7413.

Circle 303



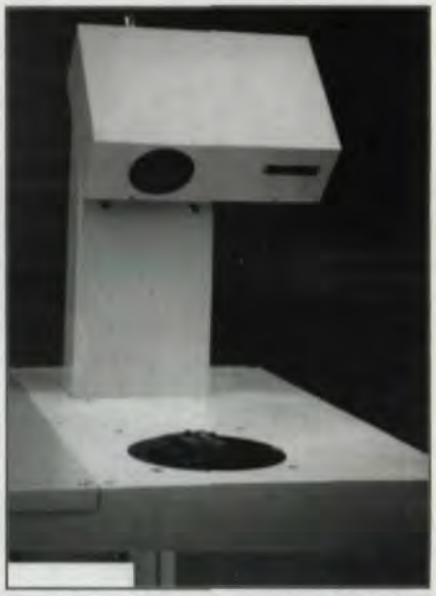
Mori Seiki Announces New Dual-Spindle Turning Center

Mori Seiki has unveiled the new RL-250 Dual Spindle Turning Center, a machine tool configured to maximize productivity and to optimize operator efficiency. With the RL Series, Mori Seiki utilizes technology for simultaneous machining. The two-spindle configuration does the job of two machines in one. The spindles are located side-by-side and operate at the same time, effectively increasing productivity. In addition, the compact body layout allows downsizing, therefore permitting a saving of floorspace.

The standard drive for both spindles is a powerful 15/11 kW (20/15 HP) Direct Drive Spindle (DDS) motor with the option for a 22/15 kW (30/20 HP) high output type. With this increased power, the equipment minimizes vibrations and heat allowing for more stable, more efficient and more accurate production. Sufficient torque is ensured at low speeds, and full power is readily available across a wide range.

Twin turrets hold 12 tools each. A hydraulic positioning motor provides rotational drive power, thus allowing the turret indexing a rapid 0.6 sec/station. The rapid traverse rate for the X and Z axes is 24m/min (944.9 ipm). This provides users with superior speeds along the slideway and can reduce non-cutting time in the process. The leg and bed are cast as a single unit, ensuring high rigidity with no overhang and increased stability. For more information contact Mike Jouglard or Bill Jones at Mori Seiki at (972) 929-8321.

Circle 304



New 3D Laser Comparator from CAItech.

CAItech introduces a new generation of 3D part inspection equipment that is automatic, rapid, precise and cost effective. Priced under $20,000, the machine automatically verifies dozens of dimensions on a part to +/- 2 micron repeatability in 30 seconds. Three models handle different sized parts: 1"cube, 3" cube and 9" cube.

Unlike optical comparators that only image the 2D silhouette of a part, CAItech's 3D Laser Comparator measures the part's surfaces in 3D. Rugged and temperature compensated, it can be used on the shop floor next to production equipment. Dimensions on parts made on NC mills and lathes can be verified as they are produced, quickly identifying improper setup, tool wear or tool breakage. Molded parts can be checked for warp and short shots as they leave the injection machine. Bend angle and forming errors of stamped parts can be detected right at the press. The one-touch operation is simple enough for machine operators with little computer training. For more information contact CAItech at (408) 225-6377 or by fax at (408) 226-1950.

Circle 305

ONA EDM Introduces Techno 400 EDM

ONA EDM introduces its Techno 400 CNC EDM. The Techno 400 EDM is designed with intelligent engineering that reduces operator maintenance, slashes downtime and lowers repair costs. The Techno 400 features the new Techno high performance generator, linear glass scales on all axes and 1.5" diameter double nut, pre-loaded recirculating ball screws to maintain machine precision. It is available in both fixed and drop tank configurations. It also features the ONA 10,000 hour filtration system that eliminates the loss of production due to filter maintenance. Techno Series machines are also available in 300 and 600 models. For more information on the Techno 400 CNC EDM, call 1-888-ONA-EDMS.

Circle 306

New Multi-Stage Conveyor Wash System from Guyson

Guyson Corporation has introduced a series of conveyorized aqueous cleaning systems that incorporate a second washing or rinsing stage in addition to a heated air drying section. The upgraded Marr-Line through-belt power spray washers are offered in three standard sizes.

Designed for use with environmentally benign water-based cleaning solutions, the Marr-Line systems feature an overlapping circumferential spray pattern to ensure forceful impingement of the temperature-controlled aqueous solution on all aspects of the components as they move through the machine on a honeycomb mesh belt with variable speed control. High impact V-spray jets are fitted to a series of spray bars positioned on all four sides of the parts for complete coverage and thorough rinsing. The system's modular construction permits a combination of various wash, wash-rinse and wash-rinse-dry cycles to satisfy virtually any cleaning process requirement. For more information contact J.C. Carson at Guyson, (518) 587-7894.

Circle 307

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