

Gleason

INTRODUCES TITAN 1200H HOBBING MACHINE, EXPANDS GENESIS SERIES

Gleason has introduced the Titan 1200H hobbing machine, the first of a new series of Titan hobbers designed for larger cylindrical gears with diameters ranging from 800 mm to 6,400 mm, and modules up to 40 mm. The new Titan 1200H hobbing machine, for workpiece diameters up to 1,200 mm, features a new machine design that optimizes chip disposal for highly productive dry machining, while at the same time greatly improving operator accessibility to the work area to help reduce non-productive time for part and tool change-over. Non-productive time is further reduced through use of a fast, powerful automated ring loader, and Gleason's X-Pandisk workholding system, which automatically clamps and centers parts even as heavy as 2,000 kg. The new machine design also delivers the exceptional system stiffness, rigidity and damping characteristics required for today's most demanding productivity and quality requirements, with a combination of a composite steel machine bed and new patent-pending combination slideway/anti-friction guideway design. In addition, the Titan 1200H's new operator interface, based on the latest Siemens 840D Solution Line CNC control system, enables any machine operator to more quickly and efficiently set up and operate the

machine for maximum performance. The new Titan series is also designed to help customers meet the need for greater sustainability, with the latest drive and motor technology and software capabilities to closely monitor and manage energy consumption.

Gleason's Genesis series now includes 260H and 400H vertical gear hobbing machines for the production of spur and helical gears up to 260 mm in diameter, and 400 mm in diameter, respectively, and up to 700 mm of axial travel to accommodate extra-long shafts. The new Genesis gear hobbing machines are particularly well-suited for the demands of today's dry machining environment, featuring an exceptionally clean and uncluttered work chamber and a single-piece mineral cast polymer compos-



ite base/frame with damping and thermal stability.

They are also among the most compact machines in their class, with a slim-profile design that makes it easier to both install the machines and integrate all styles of automation for cell/system application, as well as making it faster and more efficient for operators to manually load/unload parts and tooling.

Additionally, users can choose from two direct drive modular workspindle options, two different high-performance hob heads, multiple tool interfaces, quick-change workholding, and integrated rotary chamfering and deburring to greatly improve the productivity of the widest range of gear hobbing applications, whether small batch or automated high volume production.

Like all the Genesis machines, the new 260H and 400H are designed to simplify and make more efficient every operation and maintenance task. They are equipped with the Siemens 840D CNC control running the latest Gleason Windows-based software. All major service components are consolidated in Easy Access Modules to speed and simplify maintenance. Finally, both machine models are designed to help customers meet the need for greater sustainability with a host of features that greatly reduce energy consumption.

For more information:

Gleason Corporation
1000 University Avenue
Rochester, NY 14692
Phone: (585) 473-1000
sales@gleason.com
www.gleason.com

MC Machinery

EXPANDS MILLING LINE

MC Machinery Systems, Inc. expands its product supply chain with the new MC Milling line. The Diamond Cut general milling line is

comprised of five series of vertical machining centers and drilling and tapping machines. This addition supports the company's focus on improving its products, services, and product portfolio to support U.S. manufacturers.

The MCV Series is a general purpose machining center featuring two spindle/tooling system types. The CAT-40 tooling system uses an 8,000 rpm motor and the CAT-50 tooling uses a 6,000 rpm motor. It performs well in a wide variety of applications

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including fixtures, mold base, and secondary operations. The series comes with coolant-thru-spindle preparation and an M70 Mitsubishi controller. The machine can be equipped with a ZF gearbox to achieve four times the torque of a standard motor.

The DV Series is a general purpose machine, featuring a 15,000 rpm direct drive spindle and CAT-40 tooling. It can accommodate smaller cutting tools for more intricate milling work, and is a popular choice among job shops because of its wide range of applications. The series comes with coolant-thru-spindle preparation and an M70 Mitsubishi controller.

The DM Series features a 20,000 rpm HSK-A63 spindle, and a more rigid and accurate tooling system. This series excels in close-tolerance work and is suitable for applications in mold and die. The 32-position automatic tool changer provides better tool life management and boosts machine productivity. An M720 Mitsubishi controller, linear scales, and roller guide-ways are standard features of the DM Series.

The SV Series is built with a heavy-duty box way construction in the X, Y, and Z axes, suitable for rigidity and stability in large parts. The

machine excels in maximum material removal with its ability to handle bigger tools. The machine features a 10,000 rpm spindle, CAT-50 tooling, and hand-scraped box way guides, for years of accuracy and durability. The series comes with coolant-thru-spindle preparation, an M70 Mitsubishi controller, and optional ZF gearbox for higher torque.

The TV Series of drill/tap machines feature a 24,000 rpm high-speed spindle driven by a 5 hp motor. BBT-30 dual contact tooling delivers extra rigidity and better Z depth control during operation. The fast and simple, two-second tool changes provide multi-axis machining all in one setup. A bi-directional tool magazine is driven through advanced PLC software which is achieved through the M70 Mitsubishi controller. A CAM-driven tool magazine allows rotation and accuracy and smooth motion even while large tools are loading.

For more information:
MC Machinery Systems, Inc.
1500 Michael Drive
Wood Dale, IL 60191
Phone: (630) 616-5920
www.mitsubishi-world.com

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Sandvik

INTRODUCES NEW TURNING INSERTS

March 1, 2012 sees the introduction of a new range of turning inserts from Sandvik Coromant. Spectrum turning is a minimum program that provides a simplified choice of inserts designed to efficiently machine different materials at various cutting conditions. Suitable for different small batch production, Spectrum turning grades and geometries take away the complication of having several different tools for different jobs. Whether external or internal machining, rough turn-

ing or finishing, machining continuously or with interrupted cuts, these inserts have been designed to be as versatile as possible, delivering high performance output in terms of reliability, tool life and chip control. The grades can be used for turning in steels, stainless steels, HRSA, cast irons, titanium and nonferrous materials. Two grades are being launched:

GC15 combines high strength micro-grain cemented carbide with a thin, PVD coating that adds edge strength and wear resistance. GC30 has high bulk toughness with a gradient cemented carbide substrate and a highly wear- and heat-resistant CVD coating.



For more information:

Sandvik Coromant
1702 Nevins Road
Fair Lawn, NJ 07410
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Index

INTRODUCES MULTI-SPINDLE LATHE

Index recently introduced the new MS22C-8 as part of its Multiline series. The new modular eight-spindle machine opens up additional opportunities for fast multi-spindle parts machining, especially highly complex parts. The Index MS22C-8 NC multi-spindle automatic lathe



has many applications throughout industries ranging from automotive to medical technology. It also produces small batches efficiently and economically. The versatile Index MS22C-8 can be bar-fed or loaded with chucked parts.

The MS22C-8 can accomplish turning, off-center drilling and thread cutting, inclined and cross-drilling, milling, multi-edge turning, hobbing, tooth milling, deep-hole drilling or slotting. Another benefit for the user is that all standard tool holders and tool holder system interfaces can be used with a range of popular adapters (Capto, HSK, VDI, Index systems). Each of the eight spindles, arranged in the well-known Index spindle drum, are assigned two cross-slides which

can travel both on the X as well as on the Z-axis. Each cross-slide can be additionally equipped with a Y-axis.

Combined with a total of up to 16 cross-slides, the new eight-spindle machine is therefore a true multi-talent even for highly complex machining. The speed of each of the eight liquid-

cooled spindles can be controlled separately. The fluid-cooled spindle drum keeps the thermal growth in the spindle carrier to a minimum. The advantage compared to the previous air-cooling approach is the higher power density in the spindle drum and

continued



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the capability of energy recovery from the heated cooling fluid. In addition, the spindle bearing temperature can be kept at a low level, which also prolongs its service life and improves thermal stability.

The cross-slides with integrated drive have a low-mass design with hydrostatic bearing support. Their low moment of inertia and resulting high dynamics facilitate outstanding acceleration in operation. The new MS22C-8 in double four-spindle mode actually runs as two machines working with one another simultaneously on a single base. Every second tool station always has simultaneous access to the same tools. When operated as an eight-spindle machine, the drum indexing angle from spindle to spindle is 45 degrees; if the machine operates with two times four spindles, the drum indexing angle is 90 degrees. Results

from double four-spindle machining: two finished parts are produced by the machine per work cycle. In double rear end machining, there are six spindle positions available for front machining the workpiece and two spindle positions for rear end machining, and they all work simultaneously. With this approach, it is possible to machine the rear end of a workpiece during two drum indexing cycles.

After front machining, for which six spindle positions are available, workpieces are picked up by two rear machining units and machined simultaneously on the rear end. Because rear end machining is done during two drum indexing cycles, up to six tools can be used for this simultaneously with the other spindles. And because all cross-slides are located at the same travel angle to one another, free chip flow is guaranteed in each position.

The advantage of hydrostatic sliding guide in the feed axis (Z) is their damping characteristic that prevents the transfer of the machining vibrations to the adjacent slide via the headstock. This helps to mitigate vibration and rattling while workpieces are being machined—even when the most diverse machining processes are being performed concurrently by the eight spindles. For example, one spindle can be used for heavy-duty roughing while high-precision finishing takes place on another spindle without sacrificing surface quality. In addition, the hydrostatic bearing is wear-free—there is neither friction nor a stick-slip effect.

The swiveling synchronous spindles are locked into the end positions by three-part Hirth couplings. The high level of stiffness that this achieves also guarantees that even with



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bar diameters up to 24 mm, rear end machining operations with very high cutting volumes and simultaneously high machining precision can be performed.

The Hirth coupling also means it is no longer necessary to electronically compensate at the end position. The mechanical lock ensures optimal stiffness and increases the positioning accuracy. This allows even highly complex components to be produced that require complex cut-off side machining. The swivel movement to the rear end position occurs in less than 0.3 seconds.

The advantage of the front-opening design for the operator is the excellent accessibility during setup and tooling. Moreover, there is the free chip flow down into the chip discharge chute. To save space, the Index engineers simply placed the control cabinet on the machine. This principle of integrating the control cabinet into the machine roof has been applied to Index multi-spindle machines for almost 15 years and has been very well received in the market.

Discharging workpieces damage-free from the work area and placed on pallets in the right position for later treatment, the MS22C-8 can include optional handling solutions: machine-integrated handling with external stacking unit that ensures both destruction-free removal of parts from the machine, including measuring operations for the workpieces if needed. Workpiece data can be fed back directly to the machine control so it can automatically correct its machining parameters.

For more information:

Index Corporation
14700 North Point Boulevard
Noblesville, IN 46060
Phone: (317) 770-6300
Fax: (317) 770-3166
www.index-usa.com

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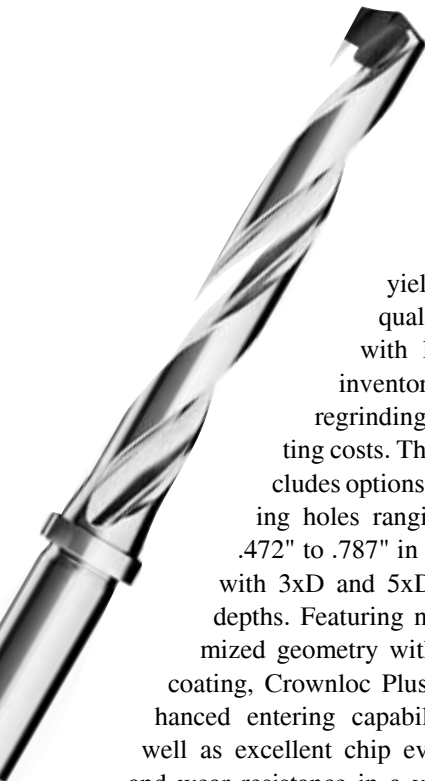
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yield high quality holes with less tool inventory and no regrinding or resetting costs. The line includes options for drilling holes ranging from .472" to .787" in diameter with 3xD and 5xD cutting depths. Featuring new optimized geometry with TiAlN coating, Crownloc Plus has enhanced entering capabilities, as well as excellent chip evacuation and wear resistance in a variety of materials, including stainless steels and superalloys. The line's strong, polished drill body design includes deep and wide flutes and a high-strength locking interface. For best results, Seco recommends using these exchangeable crowns with the following holders: the Weldon DIN 1835 B/DIN 6535 HB, Type 5834 hydraulic chucks (for cylindrical, -R1 shanks only) or Type 5603 shrinkfit holders (for cylindrical, -R1 shanks only). In terms of coolant mix, Seco recommends an emulsion mix between six and eight percent, however, when drilling in stainless steels, superalloys and high strength steels the recommended mix is 10 percent.

For more information:
 Seco Tools, Inc.
 2805 Bellingham Drive
 Troy, MI 48085
 Phone: (248) 528-5200
www.secotools.com

Mahr

OFFERS SKIDLESS SURFACE GAGE

Mahr Federal will be featuring the addition of a new skidless surface evaluation system to its MarSurf line of mobile surface metrology systems at MD&M West, February 14-16, 2012, at the Anaheim Convention Center, Anaheim, California. Mahr Federal will occupy booth #3069. The new MarSurf M 400 features proprietary motorized probe height adjustment that quickly and automatically zeros the probe in seconds and can cut measurement time in half. The M 400 also features a magnetic, breakaway probe mounting system that protects sensitive probes from accidental damage and facilitates fast probe changes. The MarSurf M 400 measures all common international parameters and features Bluetooth connectivity between the measuring system and the evaluation unit with integrated thermal printer.

Skidless tracing of surface characteristics allows the capture of primary, waviness, and roughness profiles for the evaluation of more complex parameters. The new MarSurf M 400 offers this capability in a very economical, entry-level system, and is the only one to include proprietary auto-probe zeroing, which can dramatically increase the ease and speed of measurement. The magnetic probe mounting system also protects delicate probes and allows probe arms to be rapidly changed with just a touch.

The measuring unit can be used alone in different orientations, in combination with various accessories, or mounted on a measuring stand. A large color display on the evaluation unit provides clear, concise results and intuitive operator guidance. The unit is

compatible with all appropriate DIN, ISO, JIS, ASME and MOTIF standards for the measure of most common surface finish parameters from the P, W, and R profiles.

The MarSurf M 400 comes in its own carrying case and includes the M 400 Evaluation Unit with integrated thermal printer, and Bluetooth connectivity with the newly designed SD 26 Drive Unit with the breakaway BFW 250 probe system and standard probe arm. Battery or AC adapter operation extends flexibility, and two USB cables allow connection to a PC or optional use with the drive unit.

For more information:

Mahr Federal Inc.
 1144 Eddy Street
 Providence, RI 02905
 Phone: (401) 784-3100
www.mahr.com

