

Marposs

M62 FLEX GAUGE INSPECTS WIDE RANGE OF GEARS

The Marposs M62 Flex manual bench gauge system was created for the production environment, this gauge provides the flexibility to measure gears with different diameters without mechanical retooling. Utilizing a universal reference "Vee" on a 30-degree angle eliminates the need of using an ID centering post (or nosepiece) to locate each part for measuring, and it reduces set-up time.

The gauge employs servo-driven actuators and is the first smart gauge that integrates "soft-touch" technology when engaging with the gear being measured. Soft-touch technology addresses the age-old issue where green parts and master parts could be damaged by the measuring contacts. The M62 soft-touch technology employs a software routine where



the measuring group is able to approach a gear surface in velocity mode, with a controlled low force, while the position error is monitored, resulting in better control of the process and avoiding

damage.

The M62 Flex can inspect odd or even toothed helical and spur gears with external diameters from 30 ÷ 180 mm, heights ranging from 15 ÷ 40 mm and modules from 1 to 4. It has mechanical turrets with capacity to locate up to 12 contacts each and is suited for inspecting DOB (MdK), major diameter and minor diameter.

For more information:

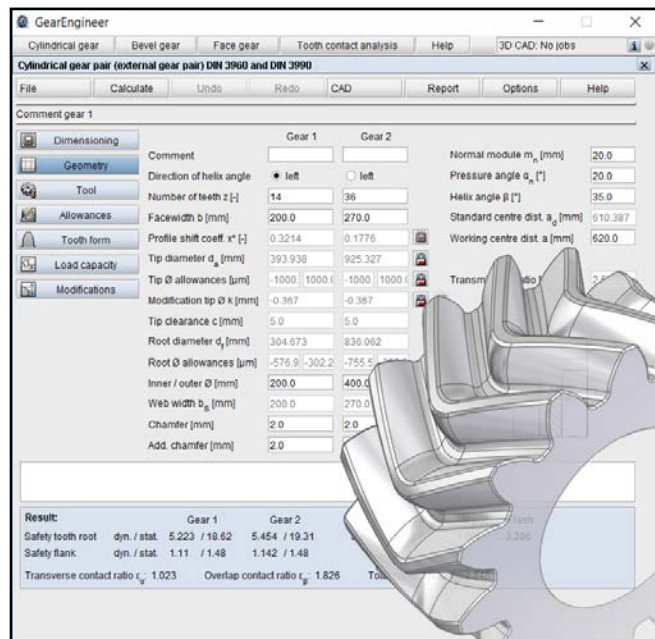
Marposs Corp.
Phone: (888) 627-7677
www.marposs.com



GWJ Technology

RELEASES LATEST VERSION OF GEARENGINEER SOFTWARE

GearEngineer is a software program designed for calculating the real 3D tooth form in addition to the dimensioning and load capacity of cylindrical and bevel gears. *GearEngineer* calculates the gear tooth form based on a mathematical simulation of the manufacturing process analogous to traditional manufacturing on gear cutting machines. This geometry provides the basis to manufacture cylindrical and bevel gears in conjunction with multi-axis machining centers. The new version was introduced for the first time at AMB 2018 to a wide audience and comes with a number of new functions. All calculation modules now include two unit systems: the metric system and the U.S. customary unit system. The user can quickly switch between the units. Gear qualities according to ISO 1328 and ANSI/AGMA 2015 for cylindrical gears are now integrated. In addition to the load capacity calculation in



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accordance with DIN 3990 and ISO 6336 Method B, the ANSI/AGMA 2101 standard was also added.

The user can work with a tip radius instead of the addendum chamfer for cylindrical gears. The definition of basic rack profiles for external cylindrical gear pairs was supplemented by the semi topping flank and topping. Using the definition of the semi topping flank, the corresponding hobs can then be specified, and they generate an addendum chamfer or tip relief during the gear hobbing process.

The calculation of the 3D gear tooth form of true herringbone gears is the highlight of the new *GearEngineer* version. True herringbone gears are two connected helical gears but they do not have a gap separating the two helical faces. There is a rounded connection between the two halves. The tooth geometry including the rounding process of herringbone gears is very complex but can be calculated and generated by using *GearEngineer*. The complete flank and root geometry can now be

created automatically for the manufacturing of herringbone gears and used for further CAM programming. This opens completely new perspectives for the manufacturing of herringbone gears on multi-axis machine centers instead of using obsolete Sykes machines. Whereas, previously soft machining was usual, today it is possible to use the hard machining process for manufacturing herringbone gears.

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Norton | Saint -Gobain

INCREASES GRINDING
PRODUCTIVITY WITH CBN
WHEELS

Saint-Gobain Abrasives has announced the introduction of its new Norton Winter Vitron⁷ cBN Grinding Wheels. The wheels feature a high-precision vitrified bond specifically designed for the high performance external grinding of cam and crankshafts and internal grinding applications in automotive and bearing industries.



“Our Vitron⁷ wheels provide an ideal solution for the increasing demands of grinding in these applications where high surface quality, reduced cycle times and manufacturing costs are critical,” said Bill Lane, senior product manager, Norton | Saint-Gobain.

Norton Winter Vitron⁷ wheels feature premium cBN grain particles uniformly dispersed throughout the bond matrix for maximum grinding efficiency. This enables manufacturers to achieve substantial increases in the number of finished parts between dress cycles,



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Curious to learn more?

CONTACT US:

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significantly reducing cycle times and extending wheel life up to 40 percent over existing products. Vitron⁷ wheels also grind cooler due to a lower specific grinding energy (SGE) that ensures minimal residual stress, for superior part quality with surface roughness degradation reductions of up to 30 percent. When ID grinding, lower power results in less deflection and minimizes taper while maximizing part straightness.

For more information:
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Mitutoyo America

INTRODUCES U-WAVE FIT TO DATA MANAGEMENT SYSTEMS PRODUCT LINE

Mitutoyo America Corporation is pleased to announce the release of U-Wave fit to its data management systems product line.

The U-Wave fit is a new, compact attachment for Mitutoyo calipers and micrometers that transmits measurements wirelessly to a PC using the digimatic protocol. The elimination of long, cumbersome data cables help improve measurement efficiency and speed while maintaining precise accuracy. The unit's user-friendly interface allows data to be loaded into any software product that accepts keyboard input.



Named for its comfortable, ergonomic design, the U-Wave fit quickly and easily installs for over 1,600 different Mitutoyo calipers and micrometers. The unit's design allows the operator to handle and use the tool with comfort and confidence without sacrificing accuracy.

The U-Wave fit is available in models including IP67 and buzzer types for 4", 6", 8" and 12" IP67 calipers, standard calipers and coolant-proof (IP65) micrometers. During standard operation, the U-Wave fit has a wireless range of 20 m (60 ft.) and its 220 mAH battery lasts for over 400,000 transmissions. The Digimatic2 communication format is high resolution and sends polarity and the unit of measure.

For more information:
Mitutoyo America Corporation
Phone: (630) 820-9666
www.mitutoyo.com

C & B Machinery

EXPANDS CBV SERIES CLAMP BORE GRINDERS

C & B Machinery's lineup of vertical clamp bore micro-finishing grinders has been expanded yet again. The company continues to strive to meet customers' ever-growing needs for flexibility, throughput volumes, integration with plant automation and maximizing perishable tooling life.

The single spindle models can be an economical choice for lower volumes and lower tooling cost. The double spindle models work well for applications where different work holding at each station has advantages and volumes are a bit higher. To the other extreme, C & B's rotary index models can offer the tooling flexibility and the very highest level of throughput.

C & B now offer a higher speed grinding spindle option to maximize efficiency for customers using CBN grinding wheels vs. conventional free cutting, self-dressing vitrified wheels.

The CBV Series offers multiple part handling options including operator hand load/unload, robotics integration (Fanuc Authorized Integrator), gantry load/unload with part flipping capabilities, and in-process gauging with load pre-check for stock and runout. The gauge fixture is designed for quick adjustments with no tools required. Software is designed for control of stock removal on each side and part orientation entering or exiting the cell. Error proofing for part load and part type can also be designed into this system.

For more information:

C & B Machinery
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DMG MORI

INTRODUCES NEW HORIZONTAL MACHINING CENTERS TO NORTH AMERICAN MARKET

With a production capacity of up to 1,200 machines per year, the DMG MORI Davis, California location manufactures and assembles vertical machining centers such as the CMX 1100 V and horizontal machining centers such as the NHX 4000 3rd Generation and NHX 6300 2nd generation.

At IMTS this year, DMG MORI presented the NHX 4000 3rd Generation machining center with a 21 RPP rotary pallet pool feature. It includes a spindle speed of 20,000 rpm, a power rating of 50 hp and a maximum torque of 163 ft.lbs. Added to this is a 36-month warranty that DMG MORI provides for all its own MASTER spindles – with no runtime limitation. Standard auto coupler hydraulic fixture interface enables the NHX 4000 3rd Generation to automate in a more efficient manner. This horizontal machining center

handles workpieces up to 882 lbs. and is ideally equipped for ensuring flexible and economic production thanks to its extensive range of machine and automation options.

The NHX 6300 2nd Generation is equipped with a standard 12,000 rpm, 75 hp powerMASTER spindle with maximum torque of 595 ft.lbs. An optional high-speed version from the powerMASTER spindle range has a maximum speed of 16,000 rpm and up to 1,042 ft.lbs of torque for demanding heavy-duty machining. The NHX 6300 2nd Generation offers space for pallets up to 25×25 inches, a workpiece height of 51 inches, and maximum loading capacity of 3307 lbs. By using a FANUC control, DMG MORI has managed to



considerably reduce the throughput times of this horizontal milling machine.

For more information:

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www.dmgmori.com

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Nixon Gear

ADDS GRINDING MACHINES TO INCREASE QUALITY AND PRODUCTIVITY

Two new grinding machines were recently added to production at Gear Motions' Nixon Gear Division in Syracuse, NY.

The Studer S121 is a 2-spindle universal cylindrical grinder capable of grinding IDs and faces. It was purchased to accommodate a program for a new customer with Nixon Gear. The machine adds new capabilities to grind small diameters with its 60,000 rpm spindle, while still being able to handle larger gears with its 10" chuck and 36,000 rpm spindle. It also vastly improves productivity by offloading work from older, mechanical Heald bore grinders. The S121 is also capable of grinding bores and faces in one setup, saving even more valuable production time.



LK Metrology

DISPLAYS CMM TECHNOLOGIES AT IMTS 2018

LK Metrology, Inc. featured their Altera "S" multi-purpose compact CMM, their Altera "M" high-speed production-type CMM with probe and laser scanning, including applications of Renishaw PH20 and REVO2 probes during IMTS 2018. All the LK Metrology CMMs will be fitted with CAMIO8 multi-sensor CMM software and Renishaw Modus

Software. In addition, a CMM robotic cell with an Altera "S" equipped with a Nikon L100 laser scanner.

The Altera "S" is LK's multi-purpose CMM with the most advanced capabilities in the compact CMM class. The machine is multi-sensor ready, allowing the user to expand the capability of the CMM as requirements change

without the need for expensive controller upgrades.

The Altera "M" range of performance CMMs delivers exceptional throughput and enhanced precision for production applications. Exclusively designed for high-speed tactile probe scanning and laser scanner applications, the Altera "M" is the preferred choice for automotive



The Toyoda GL4Ai-50 OD Grinder is another new addition to Nixon's fleet of gear manufacturing equipment. It has a Ø12.6" swing and 19.6" distance between centers. Nixon already uses a model GL4A in production, and the purchase of this newer model adds even more shaft grinding capacity. The GL4Ai-50 includes two part auto-sizer gauges, which is an increase over the older GL4A's single gauge. The 2nd auto-sizer gauge saves time and increases productivity as two different tight tolerance diameters can now be ground in the same setup.

For more information:

Gear Motions
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