

IMTS 2014, Chicago, September 8th - 13th, 2014

DMG MORI presents a true firework of innovations at IMTS in Chicago

- World-first: all machines in the new common DMG MORI design
- 2 world premieres
- 13 U.S. premieres
- DMG MORI high-tech machines – made in the USA for the USA
- CELOS – from the idea to the finished product
- Additive manufacturing in finished-part quality
- Automation solutions – live demonstrations



Chicago, IL – From September 8th - 13th, the biennial IMTS show will occupy McCormick Place in Chicago. The show will be one to remember, as DMG MORI prepares for the U.S. launch of its latest machine tool models and innovations: for the first time in the company's history, the impressive 32,600 sq.ft. booth will exclusively feature DMG MORI machines in the new common DMG MORI design. The new design delivers improved functionality and offers high value retention through long-life surfaces. User-friendliness is guaranteed by technological highlights including CELOS, DMG MORI's new control platform, adjustable displays for improved ergonomics and SMARTkey® access for personalized operator authorization and customized access privileges to the control and machine.

DMG MORI has once again demonstrated its continuing innovation power with the introduction of CELOS last year, and is now presenting an impressive total of 23 machines equipped with CELOS - from the idea to the finished product. CELOS offers a uniform interface for all new high-tech machines from DMG MORI. CELOS APPs provide the user with integrated and digitized management, documentation and visualization of order, process and machine data.

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CELOS – from the idea to the finished product

In addition to DMG MORI's customary product innovations, the development work of DMG MORI increasingly focuses on optimization of customer processes. In this context, the world premiere of CELOS at EMO in Hanover, Germany last year marked a turning point for many companies, due to the fact that CELOS simplifies and accelerates the process from the idea to the finished product, and also forms the basis of paperless manufacturing. CELOS is as easy and intuitive to use as a smartphone, compatible with PPS and ERP systems, suitable for networking with CAD / CAM applications and ready for future CELOS APP extensions.



CELOS - From the idea to the finished product

CELOS is available for all customers in the U.S. and will be a valuable tool to boost productivity, now that the North American manufacturing industry is rebounding. Additional support will come from DMG MORI's local manufacturing plant and Digital Technology Lab.

Local production – made in the USA for the USA

DMG MORI's North American manufacturing plant is located in Davis, California, and was opened in July 2012. With a capacity of up to 100 machines per month, DMG MORI domestically manufactures and assembles the two world premieres NHX 4000 2nd Generation & NHX 5000 2nd Generation, the NHX 6300 as well as the DuraVertical 5100 and DMU 50 machines. This not only creates strategic advantages for the manufacturer, but: customers benefit from local service and support with machine tools that perform with high speed and accuracy, rigidity and energy savings.



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The location in Davis, not far from Sacramento and only one hour drive from San Francisco, has a long tradition. The 200,000 sq.ft. machine tool factory was built adjacent to the design center and Digital Technology Laboratory (DTL), which Mori Seiki developed 14 years ago to research machine tool designs, controls and pallet systems. The establishment of the manufacturing plant in 2012 has created further opportunities for R&D in the U.S., while the region provides excellent engineering talent.

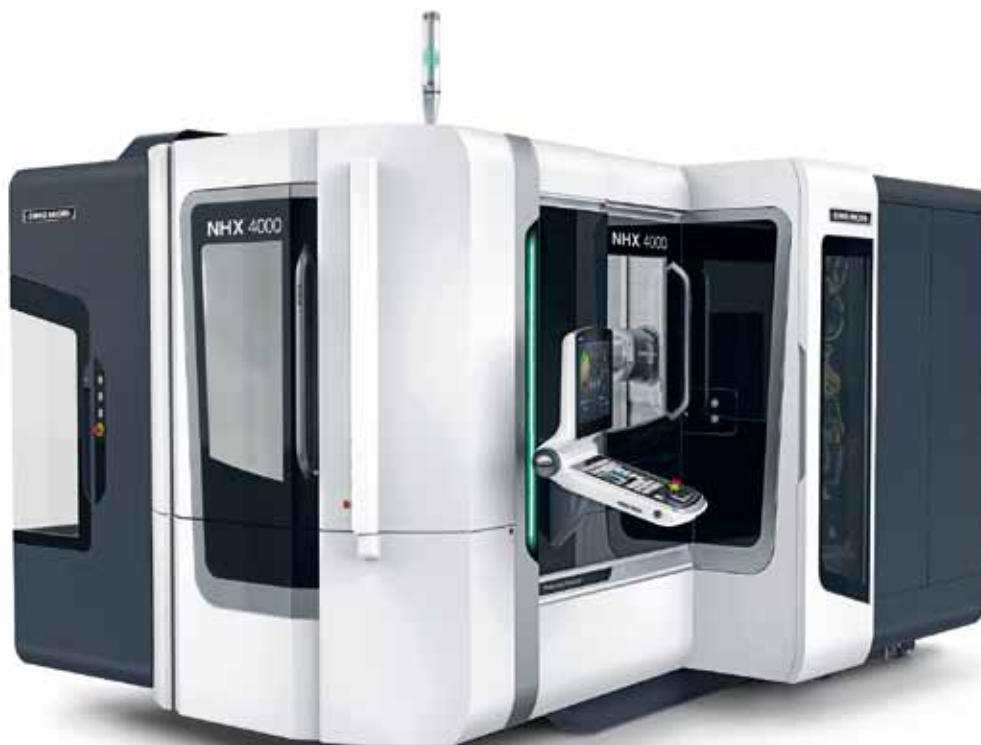


Two world premieres – both are made in the USA

The two world premieres at IMTS are made in Davis: the local production of the NHX 4000 2nd Generation & NHX 5000 2nd Generation horizontal machining centers will support the demands of the growing U.S. market. An U.S. premiere is the LASERTEC 65 3D, DMG MORI's unique hybrid machine which combines subtractive machining and laser metal deposition processes for additive manufacturing.

World premieres – NHX 4000 2nd Generation & NHX 5000 2nd Generation

DMG MORI's NHX series of high-precision, high-speed horizontal machining centers offers high-speed, high-rigidity and high-precision machining. The successful NHX series has been further improved and now impresses with two 2nd Generation models: the NHX 4000 and NHX 5000.



The new NHX 4000 2nd Generation

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The heavy-duty horizontal machining centers are ideal for machining workpieces of up to 31.4 x 39.3 in., with a loading capacity of up to 1,100 lbs (NHX 5000 2nd Generation, optionally up to 1,540 lbs). The versatile machines are now equipped with an even more powerful spindle, offering 15,000 rpm and an excellent power-to-torque ratio of 29.5 hp. with 93.7 ft/lbs. Rapid traverse has been increased to 39.4 in/s or 63.0 in/s (optional), while the new design and the advanced controller (MAPPS V and CELOS) complement the machine's high-performance features.

The workpiece range of the NHX 4000 with 400-size pallets (15.7 x 15.7 in.) comprises workpieces up to 24.8 in. in diameter and 35.4 in. in height (NHX 5000 2nd Generation: 31.5 x 39.4 in.). In a work area of 22.0 x 22.0 x 26.0 in. (X/Y/Z) for the NHX 4000 and 28.7 x 28.7 x 34.6 in. (X/Y/Z) for the NHX 5000, the horizontal centers machine components extremely accurately and efficiently. Chip-to-chip time has also been improved to less than 2.4 seconds. The high demands made on the precision of the NHX series, which is also reflected in a circular accuracy of < 0.000067 in. with 1.3 in/s feed in X and Y as well as 3.9 in. radius, go hand-in-hand with impressive speed and dynamic values.

U.S. premiere – LASERTEC 65 3D

Additive manufacturing in finished-part quality

Additive manufacturing offers new possibilities for high complexity and individuality and the market for additive technologies is rapidly growing.

DMG MORI's unique hybrid solution combines subtractive machining (SM) and laser metal deposition processes for additive manufacturing (AM). The LASERTEC 65 3D is based on a DMU 65 monoBLOCK[®] machine and has been developed by SAUER LASERTEC in Pfronten, Germany, in collaboration with DMG MORI USA. The machine is equipped with a powerful diode laser for metal deposition, while the 5-axis machine platform enables highly accurate SM operations to be carried out.



U.S. premiere at IMTS – the new LASERTEC 65 3D

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The metal deposition process via powder nozzle is up to 10x times faster than laser sintering in a powder bed. All common metal powders can be processed, including steel, nickel and cobalt alloys, brass or titanium. Wear protection layers can also be applied on the base material.

A focus on automation

Automation is another important factor when it comes to giving manufacturers a competitive advantage in a growing market. A dedicated area at the show's biggest booth will be covering all aspects of automation solutions offered by DMG MORI that are designed to improve customers' processes and increase productivity. When DMG MORI is talking about automation, it does not stop with machine-integrated automation such as workpiece and pallet handling. DMG MORI focuses on complete manufacturing processes and production optimization. The work therefore includes not just workpiece handling but the linking of machining centers and, if possible, the integration of secondary processes parallel to primary machining time.

Every automation solution is based on modular components that are customized to align with customer requirements. Visitors to IMTS can experience the various solutions at the DMG MORI booth and discuss their specific requirements. With around 900 workpiece and pallet handling systems already installed, the company certainly has ample experience.

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