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Chicago Innovation Days

Innovative Solutions for Long-Term Partnerships

Chicago. At the Chicago Innovation Days in Hoffman Estates, IL, DMG MORI offers a glimpse into the future of machine tool manufacturing from September 13 to 18, 2026. DMG MORI demonstrates comprehensive manufacturing solutions that combine machine tools, automation, and digital technologies. Beyond delivering technology, the company supports customers throughout the entire lifecycle of their investment, from selecting the right manufacturing solution and financing concept to commissioning, service, and modernization. To strengthen close customer relationships in the U.S. market, the machine tool manufacturer is expanding its presence in Chicago, while local production in Davis, California, serves as the North American hub for manufacturing solutions. DMG MORI is presenting a total of 23 advanced manufacturing solutions tailored to today's challenges during Innovation Days, including eight 2026 premieres. On the final day, a Student Day will be held to inspire young talent to pursue careers in the world of manufacturing.



At Chicago Innovation Days DMG MORI offers a glimpse into the future of manufacturing in the USA.

BX & MX – Best Fit Portfolio for Scalable Manufacturing

DMG MORI views Machining Transformation (MX) as a holistic approach to design efficient and productive manufacturing solutions for the most demanding applications. The focus is on technologies such as 5-axis simultaneous milling on machining centers and 6-sided complete machining and turn-mill centers as the foundation for integrating additional process steps, such as gear cutting and grinding. Process Integration is just one of four pillars Machining Transformation (MX) is based on. Automation solutions and Digital Transformation (DX) also contribute to the sustainable optimization of processes, because they allow for continuous 24/7

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production as well as intelligent planning and monitoring solutions for efficient and reliable processes. The goal is competitive manufacturing that is sustainable in line with the Green Transformation (GX).

The BX concept is aimed at companies, particularly small and medium-sized enterprises (SMEs) and contract manufacturers, that demand the highest standards of machining quality but are initially looking for a cost-effective solution without an immediate need for complex, fully automated systems. Examples of these shown at Chicago Innovation Days include the CMX 1100 V for vertical milling, the universal turning center NLX 2500|700 Gen 1 for universal turning, and the NHX 5000 Gen 4 for horizontal milling. All three of the mentioned machines are manufactured at DMG MORI's production facility in the USA, providing additional advantages for the U.S. market, including shorter lead times.

Machines like these provide a cost-effective entry into future-proof production even in markets where investment is limited. In a state-of-the-art manufacturing environment, they increase production capacity for simpler workpieces. BX solutions can come with CELOS and automation interfaces, making them the perfect complement to the MX portfolio. In addition, DMG MORI technology cycles simplify complex machining processes and transform them into shop-floor-oriented programming.

Customer Care Throughout the Entire Lifecycle

For DMG MORI, the design and commissioning of a manufacturing solution marks the beginning of a long-term collaboration with its customers. The focus is on reliable partnerships throughout the entire lifecycle with end-to-end support in the USA including customer-oriented engineering of future-proof manufacturing solutions, holistic financing solutions for the investments and customized training programs for a smooth start of production. Intense support in operations and service ensures reliable manufacturing on a competitive level. To achieve this, DMG MORI combines state-of-the-art machines with efficient automation and extends its warranty for MASTER spindles to 60 months. Digital tools and products from certified DMQP partners (DMG MORI Qualified Products) such as FUCHS LUBRICANTS and HAIMER round out the range of machine peripherals. Well-designed service solutions and a reliable supply of spare parts ensure high machine availability. Modernization concepts such as retrofits and lifecycle services extend the useful life of the investment and adapt it to new requirements.

Local Production for Fast Delivery

DMG MORI Manufacturing USA's production facility in Davis, employs more than 100 people and uses CO₂-free energy to make production efforts more sustainable. As home to the USA Horizontal Excellence Center the location builds nearly the entire NHX series, ensuring future-proof production. The CMX 1100 V and the NLX 2500 Gen 1 are also built here, which supports customers in the USA with fast delivery.

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Quality and productivity are achieved through fully automated machining using DMG MORI technology. With proximity to customers and fast deliveries local production results in cost savings on investments, which strengthens customers' competitiveness. Additionally, the production site offers the refurbishment of used spindles in its Spindle Rebuild Center.

Intelligent Service Solutions and Spare Parts Directly from Dallas, TX

The remote customer portal, my DMG MORI, enables fast and transparent service with customer inquiries getting forwarded quickly and directly to the appropriate contact person. Maintenance and reordering of necessary wear parts can also be conveniently done via my DMG MORI. The online shop allows for easy searches using keywords or part numbers. It displays the availability of spare parts, along with the corresponding prices, estimated shipping costs, and delivery dates.

To ensure a fast and reliable supply of spare parts, DMG MORI maintains a Spare Parts Center in Dallas, TX. This guarantees high availability and short delivery routes for customers in North America. Fast delivery times reduce machine downtime, and support competitive production.

Expanding the Portfolio with US Premieres

Several US debuts during Chicago Innovation Days will serve as examples of manufacturing solutions that support the holistic approach of Machining Transformation (MX). For example, the high-precision NLX 2500|700 Gen 2 universal turning center will be on display for the first time with the GX10T gantry loader. In terms of control systems, DMG MORI can now equip the machine (as well as the compact NTX 500 turn-mill center) with a SIEMENS SINUMERIK ONE control.

The NTX 2500 Gen 3 is another new addition to the turn-mill segment in the U.S. market. The milling portfolio is bolstered by the 5-axis DMU 60 eVo Gen 2, the NMV 3000 DCG Gen 3, and the ULTRASONIC 65 Gen 2 for ultrasonic-assisted machining. In addition, DMG MORI is introducing the LASERTEC 30 SLM Gen 3. It enables even more productive and precise additive manufacturing.

Automation and Digital Solutions

Smaller batch sizes and greater component variety mean that automation solutions are no longer used solely for mass production; instead, they must be increasingly versatile. With a broad portfolio of pallet handling and robot-based workpiece handling systems, DMG MORI delivers customized solutions for automated, lights-out manufacturing. Highlights at Chicago Innovation Days include the RPS 6 round pallet storage system on the NHX 5000 Gen 4, a pallet handling system AWC 34 on the NMV 3000 DCG Gen 2, and the IMTR robotic automation system on the NTX 500. On the turning technologies, bar feeders – as displayed on several machines at Chicago Innovation Days – are common solutions for an automated production. Here, DMG MORI cooperates with DMQP partners like IEMCA, Edge and LNS. With their equipment they enable DMG MORI to offer holistic turning solutions. Additionally, the machine tool manufacturer can retrofit many automation solutions, enabling users to

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increase their production capacity as needed, even during unmanned night and weekend shifts.

When it comes to digitization, DMG MORI supports its customers from programming to service and with maximum connectivity. The standardized app-based user interface CELOS X works with SIEMENS, HEIDENHAIN or MAPPS and can connect the machine to the company organization. Exclusive technology cycles speed up the creation of complex NC programs; during production, intelligent monitoring ensures process reliability, for example, through the new Condition Agent. With this tool customers visualize machine conditions and benefit from highly accurate predictive maintenance without reliance on operator skill and experience.

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NLX 2500|700 Gen 2 with GX 10 T and SIEMENS SINUMERIK ONE

New Automation Solution and Innovative Control

Chicago. The NLX 2500|700 Gen 2 provides maximum flexibility and extended lights-out operation for users with a wide range of machining requirements in universal turning. With its core characteristics – stability and the associated precision – the turning center reduces throughput times while maintaining critical part quality. turnMASTER spindles on the left and right set standards in the productive heavy-duty machining of demanding workpieces. With the GX 10 T gantry loader, DMG MORI is now expanding the possibilities for automated manufacturing on the NLX 2500|700 Gen 2, while the new SIEMENS SINUMERIK ONE adds an innovative control option to the product lineup.

Precision machining for a wide range of workpieces

Enhanced and fine-tuned box guideways, stable roller guides with a width of 55 mm and double anchored ball screws ensure high rigidity in the machine's guide and drive geometry. The sophisticated temperature stabilization and compensation minimize thermal displacements coming from machine operation and environment. Among other measures, this is guaranteed by internally cooled ball screws, machine bed and spindle temperature control. In addition, direct measuring system smartSCALE provide longtime stability in production and prolonged drive accuracy. The turret is available as a BMT60, BMT40 or VDI40 with ten to 20 tool positions. The driven tools reach speeds of up to 12,000 rpm or torques up to 100 Nm depending on the machining needs. Designed for extreme heavy-duty machining, the left 10" turnMASTER spindle of the NLX 2500|700 Gen 2 offers a torque of up to 828 Nm, optionally up to 1273 Nm with the 12" version. The right spindle is available in 6", 8" and 10" design with a torque of up to 577 Nm at the top end.

With a maximum turning diameter of $\varnothing$ 14.4 in. and a turning length of up to 27.8 in., the NLX 2500|700 Gen 2 offers capacity for a very wide range of workpieces. The maximum bar capacity for operation with bar feeders is increased to $\varnothing$ 4.1 in. on both spindles compared to $\varnothing$ 3.1 in. on the previous generation. The travel distances are 10.2 in. on the X-axis and 31.3 in. on the Z-axis. A travel of 2.72 in. ($\pm$ 2.36 in.) in the Y-axis allows off-center milling, drilling and further operation with driven tools for more flexibility. Measurements can be carried out during machining at various positions, allowing users a high degree of process integration.

Integrated processes through new SINUMERIK ONE and DMG MORI technology cycles

The stealth design makes the NLX 2500|700 Gen 2 more durable and easier to maintain, while the user-friendly ERGOline operating panel is available with MAPPSX (FAMUC 31iB Plus) or, as the latest option, SIEMENS SINUMERIK ONE. Numerous exclusive technology cycles facilitate workshop-oriented programming in both cases. For example, complex processes such as gear hobbing can be integrated, enabling the NLX 2500|700 Gen 2 to fulfill a key requirement in Machining Transformation (MX).

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Automated universal turning for maximum productivity now with GX 10 T

Just like the integration of multiple processes in one workspace, the automation of production also plays a major role in the context of Machining Transformation (MX). The range of flexible automation solutions for the NLX 2500|700 Gen 2 includes various robot-based products, including the Robo2Go, the MATRIS light, and the WH-AMR 10 as autonomous mobile robots for handling workpieces. Integrated solutions for automatic unloading of workpieces are also available to match working with bar feeders. From now on the machine is also available with the gantry loader GX 10 T. The highly productive and flexible workpiece handling has a capacity for up to 20 pallets. The maximum workpiece size is $\varnothing 7.9 \times 5.9$ in. with a weight of 22.1 lb. These automation solutions are operated directly via the SIEMENS or MAPPS control system. Extended machining autonomy on the NLX 2500|700 Gen 2 allows continuous production even in unmanned night and weekend shifts. Machine utilization can be maximized to keep production lean. All of this without making compromise in sustainability and reducing use of resources like lubrication oil, coolant, compressed air and electricity.



In the U.S., DMG MORI now offers the NLX 2500|700 Gen 2 with GX 10 T gantry loader and SIEMENS SINUMERIK ONE.

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NTX 2500 Gen 3 / NTX 500

Productive and Precise Complete Machining

Chicago. The NTX 2500 Gen 3, now available in the U.S. market is an all-round machine capable of cutting complex-shaped workpieces with high accuracy and efficiency for applications in aviation & space, medical, automotive, die & mold and other precision equipment industries. The turn-mill center offers a large machining envelop with a turning diameter of up to $\varnothing$ 670 mm and a turning length of up to 1,530 mm as well as flexible cutting abilities by combined features of a turning center and a machining center. This ensures a wide range of machining from micro machining to cutting of large workpieces.

Equipped for Heavy-duty and High-accuracy Applications

DMG MORI pursues high-rigidity machines from the basic designing stage by FEM analysis. The NTX 2500 Gen 3 features a thick, high-rigidity bed for stable support during heavy-duty as well as high-accuracy machining. The machine controls thermal displacement by the cooling water circulating function that circulates cooling water around heat sources such as motors of the spindles, the turret, ball screws and ball nuts. The optimized casting form can also help control the thermal displacement of the machine. Equipped with two highly rigid turnMASTER spindles, a compactMASTER spindle with a large swivel range, and a second tool carrier in the form of a turretMASTER turret, this turn-mill center offers maximum versatility for 6-sided complete machining. The compactMASTER turn-mill spindle travels +/- 150 mm along the Y-axis and allows machining at speeds of up to 20,000 rpm.

Efficient Programming and Automation Solutions for Increased Profitability

The user interface ERGOline X utilizes a touch panel screen and keyboard to easily set up complex turn-mill operations. The NTX 2500 Gen 3 provides the highest level of performance, making it the ideal solution for customers aiming for higher efficiency and cost reduction in their production processes.

A variety of automation systems such as a gantry loader system and a bar feeder system, as well as various automation support functions completes a whole process from provision of materials to discharge of finished products on one machine. These solutions reduce non-cutting time, thereby contributing to increasing your profitability.

NTX 500 with SIEMENS SINUMERIK ONE

As a new option in terms of controls, DMG MORI now offers the NTX 500 with a SIEMENS SINUMERIK ONE, enabling even more efficient programming for demanding 6-sided complete machining. A main spindle and counter spindle, each with 8,000 rpm, as well as the high-speed turn-mill spindle compactMASTER with up to 42,000 rpm, ensure productive, precision machining of complex workpieces for example, for applications in aerospace, medical or

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mobility sectors. The travel ranges are 375 x 150 x 610 mm. At Chicago Innovation Days, the machine can be seen in live operation with an IMTR, an integrated robot for efficient workpiece handling.



Equipped with two highly rigid turnMASTER spindles, a compactMASTER spindle with a large swivel range, and a second tool carrier in the form of a turretMASTER turret, the NTX 2500 Gen 3 offers maximum versatility for 6-side complete machining.



At Chicago Innovation Days, the NTX 500 is shown with a SIEMENS SINUERIK ONE and an IMTR for efficient workpiece handling.

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DMU 60 eVo Gen 2

Revolution in 5-axis universal machining

Chicago. With the DMU 60 eVo Gen 2, DMG MORI is setting new standards in 5-axis universal machining and a milestone for precision and productivity. Based on the unique table kinematics, the proven machine concept has been fundamentally further developed to meet the increasing demands for precision, dynamics and flexibility.

This makes the DMU 60 eVo Gen 2 a capable addition to DMG MORI's Machining Transformation (MX) portfolio: The machine integrates multiple manufacturing processes, including mill-turn machining, gear production with the innovative gearSKIVING technology cycle, enabling highly efficient complete-machining operations. This process integration transforms the DMU 60 eVo Gen 2 into a multifunctional machining solution that can be flexibly adapted to a wide range of requirements and industries and exploits the full potential of future-oriented machining technology. Intelligent automation solutions optimize machine utilization around the clock if required. Modern control options – a SIEMENS SINUMERIK ONE and a HEIDENHAIN TNC 7 – on CELOS X pave the way for digital transformation (DX).

Maximum flexibility, precision at the highest level

The DMU 60 eVo Gen 2 can be used flexibly in numerous industries and meets the highest requirements for accuracy in the micrometer range (4 µm in the circular form test). Whether for the smallest tolerances or fast highly productive machining – the reliability and precision of the machine meet every industrial requirement and are unique in its segment. With an extended work area and a table load limit increased by 220 lbs. (up to 1,100 lbs.), the DMU 60 eVo Gen 2 makes a major contribution to future-proof production in a wide range of applications.

Robust construction and cooling technology for constant precision

A stable and temperature-controlled machine bed made of hybrid mineral casting and the gantry design give the new DMU eVo generation its exceptional rigidity as the basis for high-precision machining. The thermo-symmetrical design and a comprehensive cooling concept keep critical components at a constant temperature, including the guide carriages, the Y-slide, the headstock and the B-axis. This guarantees maximum positioning accuracy and thermal stability. The complete enclosure of the work area prevents coolant contact and increases the service life of the machine, while direct-drive ball screw drives and optional linear motors, ensure high dynamics while maintaining precision.

Powerful spindle portfolio

The DMU 60 eVo Gen 2 spindle portfolio joins the ranks of efficiency and precision-enhancing features. It offers speeds of up to 40,000 rpm and includes speedMASTER models in various

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performance classes. High-speed spindles with a cooled shank produce the best surfaces – also with the highest precision, so that the universal machining center can also competitively meet applications in the most demanding industries.

Productivity thanks to flexible automation solutions and large tool magazine

The competitiveness of the DMU 60 eVo Gen 2 is also increased by its compatibility with all DMG MORI automation solutions, such as the WH Cell workpiece handling system, Robo2Go Milling or PH Cell pallet handling. The space-saving machine layout (the footprint has been reduced by 20%) allows optimum integration into production. The large tool magazine with up to 300 pockets makes the DMU 60 eVo Gen 2 an ideal solution for highly dynamic and precise 5-axis simultaneous machining in automated production. Thanks to an innovative tool shutter, the chip-to-chip time has been reduced by one second to just 4.5 seconds, which further increases the machine's efficiency.

Large workspace, perfect ergonomics and ease of use

The DMU 60 eVo Gen 2 is easily accessible for both manual operation and crane loading thanks to the ergonomic, straight work area door. Compared to its predecessor, the work area is 40% larger at 750 x 550 x 550 mm, which allows a wide range of components to be processed. A large swivel range and optimum chip removal with steep inclines and a 20% wider conveyor ensure reliable production with perfect chip fall. In addition, all maintenance-relevant components are user-friendly and accessible without a ladder.



With a work area of 750 x 550 x 550 mm the DMU 60 eVo linear Gen 2 allows a wide range of components to be processed.

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NMV 3000 DCG Gen 2

New Standards in 5-Axis Vertical Milling

Chicago. Highly efficient machining of complex and precise workpieces is a common challenge in modern production environments. With the NMV 3000 DCG Gen 2, DMG MORI is setting new standards in the U.S. market for high-precision 5-axis vertical machining and paving the way to Machining Transformation (MX). The machine's robust DCG (Driven at the Center of Gravity) design and Octagonal Ram Construction (ORC) ensure low-vibration, improve acceleration and offer high-precision machining. The stable construction contributes to a long service life and machining with outstanding surface finishes. The NMV 3000 DCG Gen 2 is equipped with DDM (Direct Drive Motor) technology in the B- and C-axes, which has zero backlash and ensures high-speed feed rates. The optional milling rotary table enables maximum process integration, for example for gear cutting and grinding. With travel ranges of 500 x 350 x 510 mm the work area of the NMV 3000 DCG Gen 2 offers space for a wide range of workpieces with a weight of up to 220 lbs.

Powerful and Reliable Machining

With travel ranges of 500 x 350 x 510 mm the work area of the NMV 3000 DCG Gen 2 offers space for a wide range of workpieces with a weight of up to 220 lbs. speedMASTER spindles with speeds of up to 30,000 rpm ensure high-performance machining, while high acceleration values of up to 0.8 G and tool change times of 1.5 seconds reduce cycle times to a minimum. As a standard, the machine is fitted with stainless steel covers on the inside to improve chip discharge efficiency. In addition, with the optional zero-sludgeCOOLANT Tank, which collects up to 99% of sludge, maintains stable and reliable chip handling during continuous operation. The ERGOline X control panel with CELOS X provides excellent operability and enhances daily work efficiency. Moreover, a wide range of convenient applications improves productivity in the entire production site and drives Digital Transformation (DX).

Automatic Workpiece Changer for Increased Productivity

To further increase productivity DMG MORI offers a wide range of automation solutions for the NMV 3000 DCG Gen 2. The portfolio includes a variety of workpiece transfer systems with user-friendly design, such as the AWC 34 shown during Chicago Innovation Days. It enables long-term operation of up to 34 parts with a diameter of ø 13.7 in. and a weight of up to 176 lbs. Additionally, the NMV 3000 DCG Gen 2 can also be integrated into a MATRIS robot system and connected to a Central Storage System (CTS)

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The NMV 3000 DCG Gen 2 equipped with an AWC 34 pallet handling is one of the automation highlights at Chicago Innovation Days.

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ULTRASONIC 65 Gen 2

High-end Machining of Advanced Materials

Chicago. The demands on workpieces made of advanced materials vary significantly according to the specific industry. However, short machining times and an associated high productivity are indispensable for most companies. This is exactly where the ULTRASONIC technology from DMG MORI impresses. The superimposed oscillation of the tool results in reduction of process forces up to 50%. As a result, feed rates can be increased and surface qualities improved, or tool wear can be minimized – depending on the requirement. The number and depth of micro cracks (sub-surface damage) in hard-brittle materials is reduced to a minimum resulting in surface finishes with up to $Ra < 0.1 \mu m$.

Process Optimization Thanks to Intelligent Control

The key to reliable and precise manufacturing of demanding parts like wafer chucks or mirror support's made of silicon carbide, quartz glass, or other advanced materials is DMG MORI's third-generation ULTRASONIC technology. Intelligent control and regulation systems are the foundation for maximizing machine tool performance, ensuring maximum process efficiency, superior workpiece precision, and enhanced user-friendliness. The generator automatically identifies the optimum operating frequency of the tool and continuously maintains it in real time, ensuring that the full machining benefits of the ULTRASONIC technology are realized.

Based on the proven monoBLOCK-construction with a stiff construction, high static masses, and balanced moving parts, the ULTRASONIC 65 Gen 2 offers a solid and stable foundation for this innovative way of machining. Comprehensive cooling measures, a high-performance coolant unit and multi-sensor compensation are standard features. The ULTRASONIC 65 Gen 2 has travel ranges of 735 x 650 x 560 mm offering space for a wide range of workpieces. Several table solutions allow 5-axis machining of workpieces weighing up to 3,306 lb or complete machining with milling and turning capabilities of up to 1,512 ft-lb. The 80 rpm optional direct drive C-axis combined with the axialGRINDING technology cycle allows cylindrical surfaces or lens curvatures to be produced 70% faster than interpolation while minimizing code and user input, while the optional thru-table vacuum control allows simplified workholding while maintaining safety.

Wide spindle range and up to 180 tools

The tool magazine is available with up to 180 pockets, which allows for long periods of autonomous machining. Pallet handling like the PH Cell series as well as the Robo2Go Milling for efficient workpiece handling can increase productivity significantly.

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The ULTRASONIC 65 Gen 2 is one of the highlights presented as a premiere machine at Chicago Innovation Days.

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LASERTEC 30 SLM Gen 3

Robust and Reliable Additive Manufacturing

Chicago. At Chicago Innovation Days, DMG MORI will be showcasing the LASERTEC 30 SLM Gen 3 as a 2026 U.S. premiere. This new platform for additive manufacturing has been designed from the ground up using all the additive and machine tool design know-how within DMG MORI. With its new quad laser full overlap working area, and a build volume of 325 x 325 x 400 mm, the center of market demand is targeted. The LASERTEC 30 SLM Gen 3 is the new benchmark for robustness and repeatability.

Design principles from Milling and Turning Machines

The LASERTEC 30 SLM Gen 3 advances strengths from previous versions and accommodates customer requirements in a maturing additive manufacturing marketplace.

The most obvious feature when looking behind the sheet metal is that the primary structure of the LASERTEC 30 SLM Gen 3 utilizes castings, applying the same design principles used on the majority of DMG MORI milling and turning machines.

While using a casting is standard practice for DMG MORI it is new to additive manufacturing. A casting base guarantees the best rigidity and predictability for part manufacturing.

Unlike machine tools, there are no lateral forces from the movement of the axes on a LASERTEC 30 SLM Gen 3. However, temperature changes that cause thermal expansion within the machine are inevitable. DMG MORI has years of experience in minimizing the effect of and compensating for temperature changes within its products. Great care has been taken to ensure that the process chamber is an isolated unit within the machine. Therefore, the Floating Process Chamber is free to expand in all directions during temperature variations, thus decoupling it and any thermal affect from the build plane. Likewise, the optics are mounted on the rigid casting Gantry Frame, isolated from thermal effect. To further ensure a build free from thermal expansion, the recoater is also mounted to the frame and decoupled from the Floating Process Chamber. In addition, the Z-axis on which the build is mounted, is actively compensates for displacement. Through this thoughtful design, problems related to the position and distance between the optics and the top surface of the powder bed can be eliminated.

Intelligent powder processing with rePLUG system

To reduce time between build jobs and to increase flexibility, the DMG MORI rePLUG units have been an important competitive advantage on previous SLM products. The rePLUG is a self-contained automated metal powder processing unit that can be exchanged with other rePLUG units of a different metal powder. Existing customers with qualified processes, which are often found in the aerospace and medical industries, appreciate and rely on the rePLUG system to ensure top quality powder is continually in use. The excess powder from the working

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area is fully recycled while remaining contained within the rePLUG, all under an inert gas atmosphere within a closed loop. This not only minimizes oxidization risk or any moisture build-up, but also reduces potential operator exposure to the powder, an important safety consideration. For other customers the rePLUG makes changing between different materials much easier. Related components inside the machine itself can be easily cleaned, making the LASERTEC 30 SLM Gen 3 the quickest machine to change between materials on the market. This greatly widens the range of applications that a single machine can be used for.

Easy exchange of build containers

As additive manufacturing moves to mainstream production, the need to optimize build turnover is coming into greater focus. For the first time on a DMG MORI LASERTEC SLM, it is possible to exchange the build container quickly. This increases machine efficiency since it is no longer necessary to wait for the build job to cool down. Covers for the build container and the working area are stored inside the working area during operation. These are used to close off the build container upon removal and to ensure that the inert gas atmosphere inside the machine and the build canister are preserved. The next build job can be quickly started without a renewed inert gas flooding.

Disruption during manufacturing is further minimized by camera monitoring of the surface of the powder bed. After each layer, the surface is scanned for anomalies before the re-coater moves. These anomalies can be reported in real time to an operator to make decisions on how to best respond. For example, if only one part is affected due to a support release, that individual part can be cancelled while allowing the build to go on uninterrupted. There is also intelligent identification of where an anomaly may exist in reference to a part. An anomaly outside of the melt zone may not necessitate a build stoppage. In this way the LASERTEC 30 SLM Gen 3 ensures the highest levels of build success.

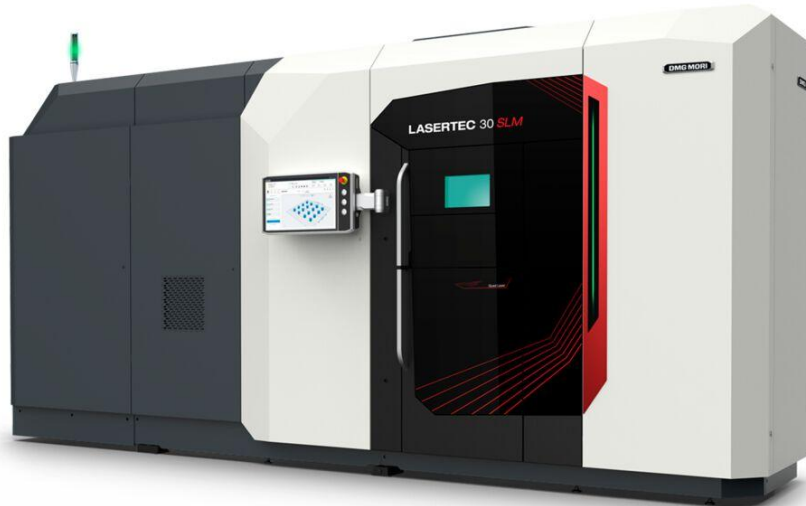
Secure operation

The newly designed inert gas flow over the powder bed ensures a consistent laminar flow during operation. The secondary gas flow below the protective glass aims to avoid any residue build-up on the protective glass. The wind tunnel like design ensures unprecedented gas flow performance. The protection glass itself is under constant observation by a secondary camera system that gives a warning if there is a problem. Additional lighting is provided around the protective glass to support the operator when checking and cleaning the protective glass between build jobs.

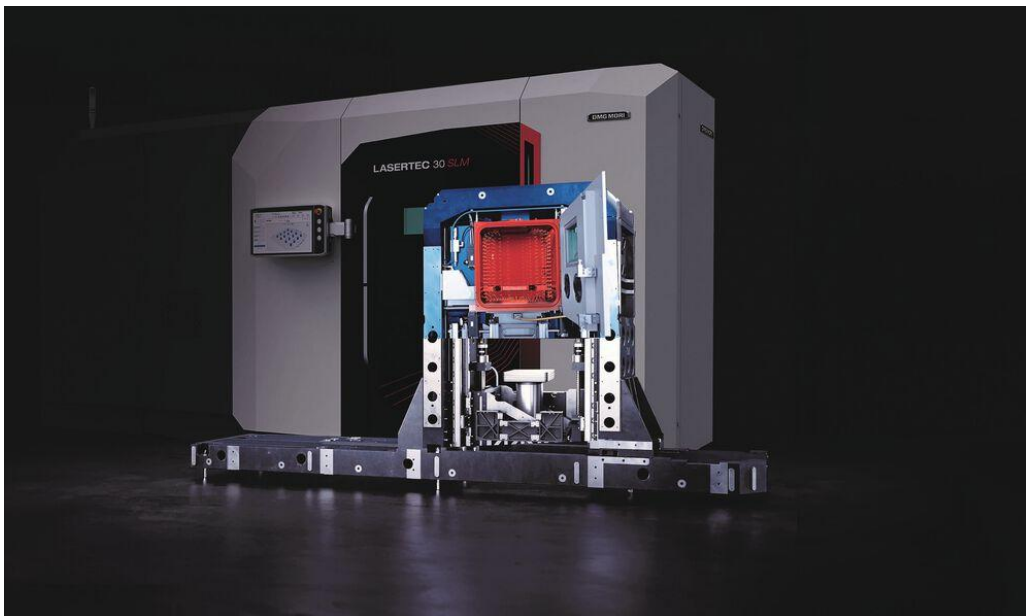
DMG MORI places high emphasis on the usability and ergonomics of the machine. Reducing the operator's contact with the powder is a primary consideration. Another key area where the LASERTEC 30 SLM Gen 3 excels is with the CELOS X operating environment. CELOS X guides the operator through all the steps required to get a job running. For example, it prompts the operator to clean the safety glass and shows how it is done. It also walks the operator through the powder refilling process, daily checks and how maintenance operations are to be performed. CELOS X guidance is important for the adoption of safe and efficient operating procedures on the shop floor.

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The new LASERTEC 30 SLM Gen 3 is a technological leap forward addressing the productivity needs of a maturing additive metal manufacturing base. It utilizes removable build canisters, material flexibility, updated filtration and gas flow as well as in situ monitoring systems, to benefit turnover times, enhance build times and enhance the operator experience.



The LASERTEC 30 SLM Gen 3 features the Floating Process Chamber, which is free to expand in all directions during temperature variations. In contrast, the optics are mounted on the rigid casting Gantry Frame.

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Digitization / Condition Agent

Data-based Predictive Maintenance of Machine Tools

Chicago. Being an important pillar of Machining Transformation (MX), Digital Transformation (DX) enables companies to produce more efficiently and reliably. DMG MORI supports customers with maximum connectivity on the side of hardware as well as intelligent digital solutions from programming to service. For example, the standardized app-based user interface CELOS X can connect the machine to the company organization. It works with SIEMENS, HEIDENHAIN or MAPPS. Exclusive technology cycles speed up the creation of complex NC programs; during production, intelligent monitoring ensures process reliability, for example, through the new Condition Agent.

Condition Agent: Data-based Predictive Maintenance of Machine Tools

With the Condition Agent customers visualize machine conditions and benefit from highly accurate predictive maintenance without reliance on operator skill and experience. With growing process integration and automation, the impact of equipment downtime has increased, and failure prevention has become more critical. However, maintenance is often reliant on specific operators, while growing machine complexity makes securing skilled personnel difficult. In response, DMG MORI now offers Condition Agent as part of our WALC CARE service. With Condition Agent, customers can visualize machine conditions and benefit from highly accurate predictive maintenance without reliance on operator skill and experience.

Condition Agent diagnoses a wide range of components that include spindles, feed axes, tool and pallet changers. By collecting data via dedicated NC programs and matching the data with their own design and manufacturing data as well as AI algorithms in the cloud, DMG MORI enables reliable automated diagnostics of wear and anomalies at an early stage. The results are available on my DMG MORI, providing a clear overview of machine and component conditions.

Furthermore, customers do not require any special measuring equipment to complete the diagnostics. With only a few simple inputs directly at the machine, the process can be completed in just a few minutes. This makes the Condition Agent the ideal tool for routine condition monitoring and data-driven maintenance, thus reducing reliance on individual operators, while improving machine accuracy and efficiency with minimized downtime.

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Condition Agent is a standard on machines with ERGOline X with CELOX X and diagnoses a wide range of components that include spindles, feed axes, tool and pallet changers.

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Company Profile // DMG MORI

DMG MORI is a leading global manufacturer of high-precision machine tools and is represented in 45 countries with 128 locations, including 18 production plants. In the “Global One Company”, around 13,500 employees are driving the development of holistic solutions in the manufacturing industry. Under the guiding principle of Machining Transformation (MX), DMG MORI combines four pillars for the efficient, sustainable production of the future: Process Integration, Automation, Digital Transformation (DX) and Green Transformation (GX).

DMG MORI stands for innovation, quality and precision. Our portfolio covers sustainable manufacturing solutions based on the technologies turning, milling, grinding, drilling as well as Ultrasonic, Lasertec and additive manufacturing. With technology integration, end-to-end automation and digitization solutions we make it possible to increase productivity and resource efficiency at the same time.

At our production sites worldwide, we realize holistic turnkey solutions for the main sectors of Aviation & Space, Data & Semiconductor, Die & Mold, Mobility, and Medical. With the DMG MORI Qualified Products (DMQP) partner program, we offer perfectly matched peripheral products from a single source. Our customer-oriented offerings cover the entire life cycle of a machine tool – including training, repair, maintenance and spare parts service.