

DATRON MILLING MACHINES

Precision. Performance. For Aluminum and other Materials...



DATRON

THE FUTURE OF MILLING TECHNOLOGY

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High-Speed Precision

DATRON combines state-of-the-art engineering with advanced technology. Our machines are designed to achieve the perfect balance of speed, stability, and precision delivering flawless results, even with the most demanding geometries.

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Intuitive Operation: DATRON next

DATRON next makes CNC milling easier than ever. This intelligent control system guides you step by step through the entire milling process from program import to the finished workpiece. Intuitive touch operation, an integrated camera, intelligent assistants, and 3D visualization ensure that even complex machining tasks are performed safely, quickly, and efficiently.

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Modular Machine Concept

DATRON machines grow with your demands. Each machine can be configured to precisely match your individual requirements. The modular machine concept offers exceptional flexibility from clamping systems and work area options to automation solutions.

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Efficient and Sustainable

At DATRON, milling is approached holistically: with minimal energy consumption, a clean process, and maximum economic efficiency. The combination of minimum-quantity lubrication, optimized spindle performance, and short setup times significantly reduce both costs and the use of resources.



DATRON

HIGH-SPEED PRECISION

DATRON combines state-of-the-art engineering with advanced technologies. Our machines are designed to achieve the perfect balance of speed, stability, and precision, delivering flawless results, even with the most demanding geometries.

Intelligent Milling Technology

- The machine's design, which perfectly balances maximum dynamics and precision, enables the production of highest-quality components in the shortest possible time.

The gantry design is engineered for maximum rigidity with minimal inertia, minimizing structural flexing even during rapid accelerations and quick directional changes. A massive, cleverly constructed machining table provides a stable foundation, utilizing state-of-the-art materials to create a highly rigid base frame. This ensures precise, smooth movements while maintaining exceptional agility.

Optional integrated linear scales further advance precision results, ensuring consistent quality throughout the machining process. They also help compensate for wear and thermal influences.

Paired with high-frequency spindles reaching up to 60,000 rpm, the system offers outstanding performance; high material removal rates allow efficient machining of large workpieces. Machining complex free-form surfaces, engravings, or fine structures, all are produced with outstanding quality surface finishes.

Our Quality Promise

- Each machine undergoes a precision measurement protocol to ensure it consistently meets the highest quality standards. The resulting geometry from the protocol serves as a quality seal for every individual machine.

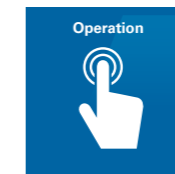


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DATRON next®

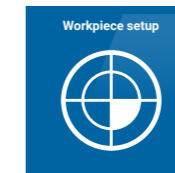
Intuitive CNC Control System designed for maximum precision and exceptional user-friendliness

DATRON next is more than just a modern machine control system, it's the gateway to a new CNC user experience. Engineered for maximum ease of use, reliability, and efficiency, it brings the simplicity and responsiveness of modern touch technology to high-speed milling.



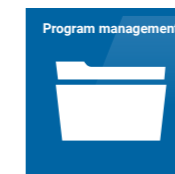
Intuitive Operation

With swipe gestures, clear icons, and a modern user interface, machine operation becomes fast, reliable, and easy, even for beginners.



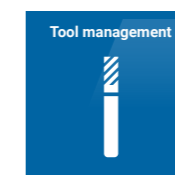
Quick Setup

The integrated camera, multi-touch interface, and intelligent assistants make workpiece setup faster, easier, and more precise.



Programs at a Glance

Automatic analysis and 3D visualization let you quickly and intuitively understand your programs allowing you to select, check, and start them with confidence.



Intelligent Tool and Process Management

Automatic tool checks, smart parameter logic, and adaptive functions help prevent errors and enhance reliability.



Future-Proof Platform

With regular updates, flexible software options, and open interfaces, DATRON next is designed to be a long-lasting, future-ready solution.

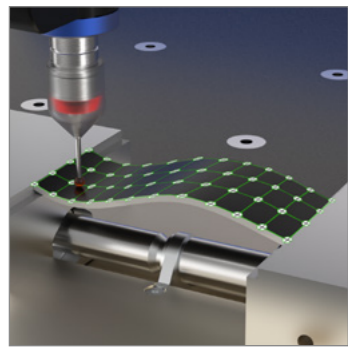
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DATRON next

PRODUCTIVITY REDEFINED

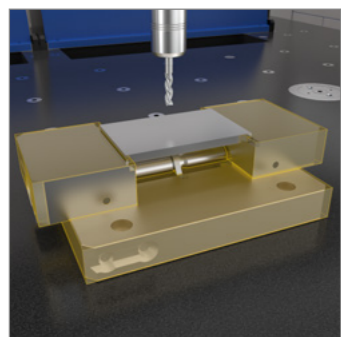
Software that Adapts to your Manufacturing

Configure your software with various available options to meet the exact needs of your application. This flexibility helps the software efficiently support both the machine operator and the overall manufacturing process.



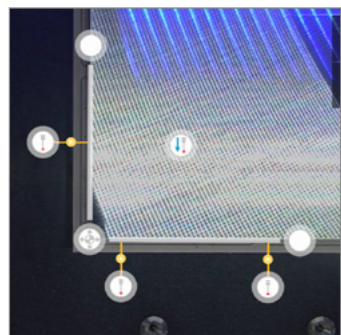
□ DATRON next Surface Profile

The “Surface Profile” function measures workpiece surface irregularities and compensates them directly during the milling process. The optional “Visual Set-Up” feature makes the process even more intuitive and faster, ensuring perfect results with minimal effort.



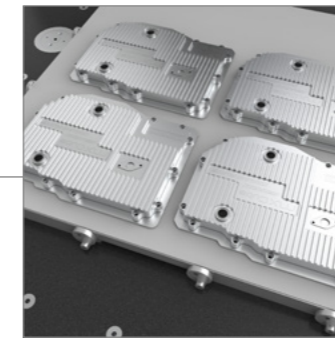
□ DATRON next Protected Areas

The “Protected Areas” feature lets you define safe zones within the workspace that the cutting tool cannot enter. Setup is quick, management is straightforward, and clear status icons allow you to monitor these zones at all times.



□ DATRON next Visual Set-Up

The “Visual Set-Up” feature allows for quick, intuitive, and safe workpiece setup. Outlines can be defined directly on the camera image using touch controls. The workpiece is then automatically scanned, and its origin is determined with high precision, enabling accurate setup in just seconds.



□ DATRON next Multiple Version

The “Multiple Version” feature allows you to easily duplicate several identical workpieces without modifying the CAM program. Whether arranged in a grid or at freely defined positions, setup is completed in seconds, and all tool paths are clearly displayed in the 3D simulation.



□ Connectivity

DATRON next is ready for networked manufacturing. With REST API and OPC UA, automation and monitoring can be seamlessly integrated into your systems. DATRON Live enables fast and easy remote access, the setup is quick and ready for immediate use.



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DATRON

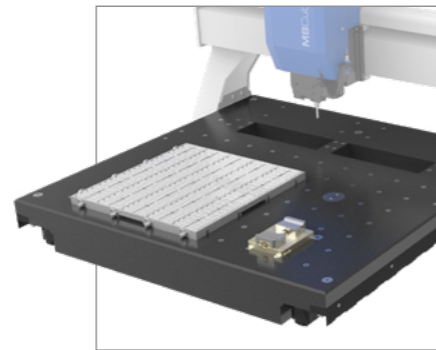
USER-FRIENDLY AND PRODUCTIVE

Modular Machine Concept

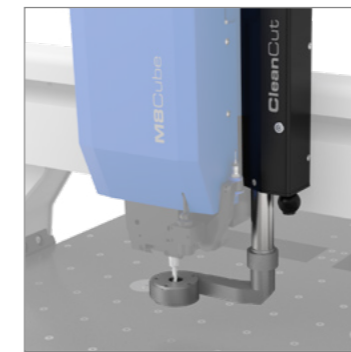
DATRON machines grow with your needs. The modular design allows each machine to be configured to integrate seamlessly into your unique manufacturing process. Flexible, scalable, and purpose-built for efficiency, every machine is designed to perfectly match your workflow.

□ The work area can be precisely tailored to a wide range of applications. Whether you need a large surface for flat panels or a table with cut-outs for vertical clamping, the machine is designed to accommodate your workpiece—not the other way around. The integrated cone grid allows for rapid, repeatable positioning of all DATRON clamping devices, providing the perfect foundation for consistent, reproducible quality.

□ For more demanding multi-sided geometries, the machine can be upgraded with DATRON Axis4 or Axis5, transforming it into a full 4 or 5 axis solution. This enables the machining of complex parts, reduces clamping requirements, and ensures higher reliability, all without compromising the system's flexibility.



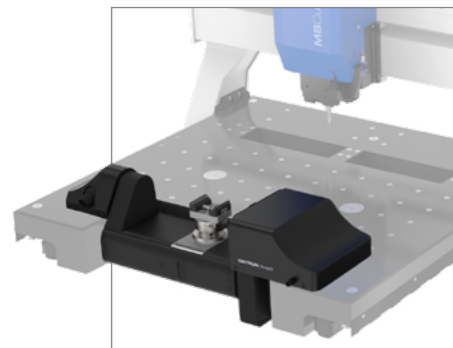
DATRON Clamping Devices



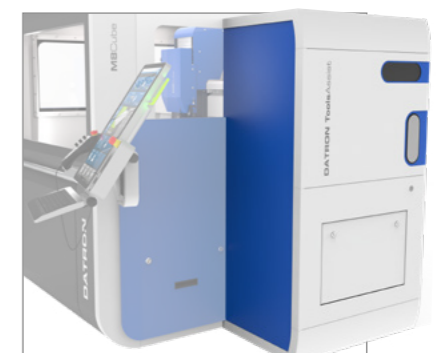
DATRON CleanCut



DATRON Coolant Tank



DATRON Axis5

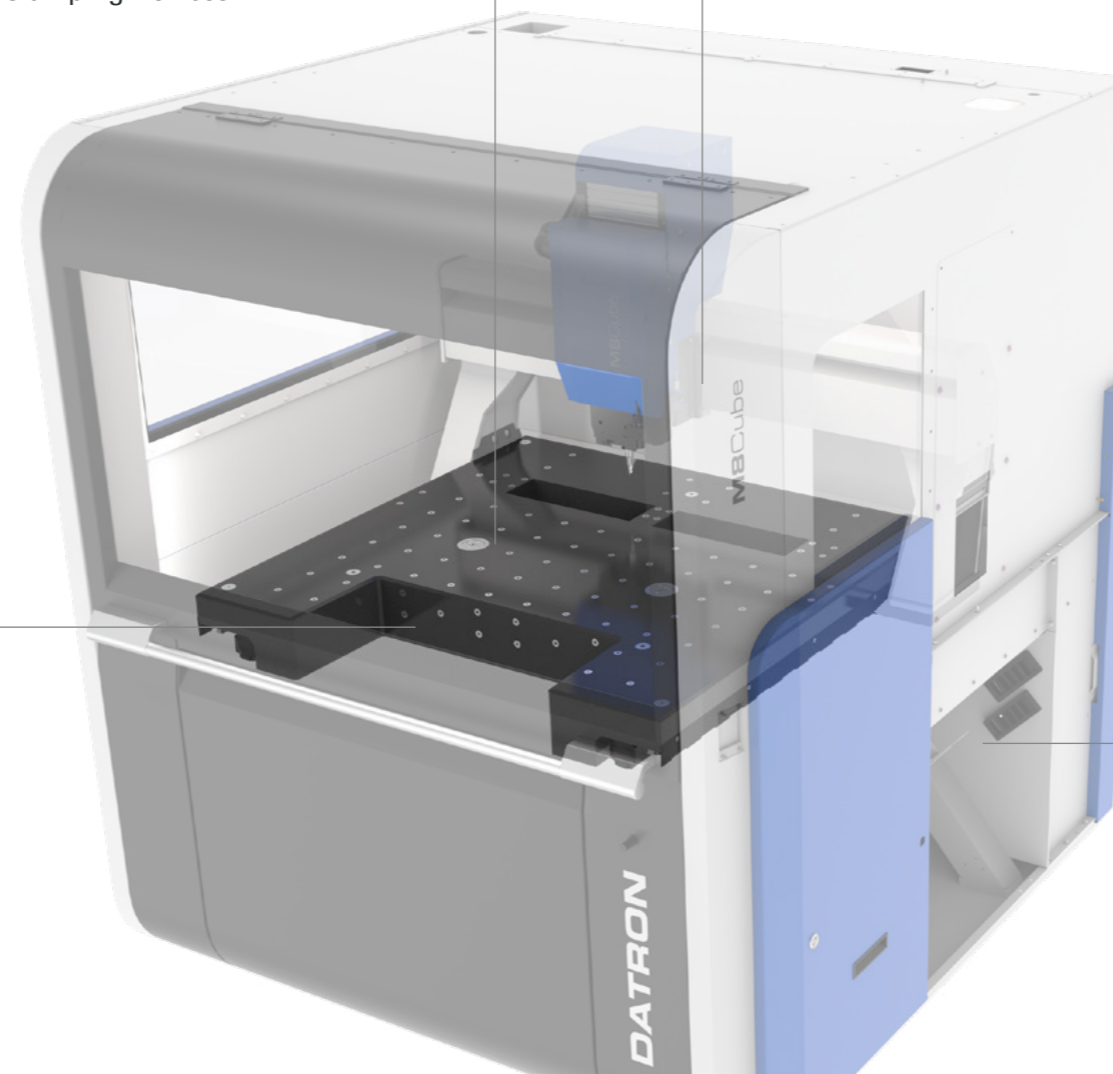


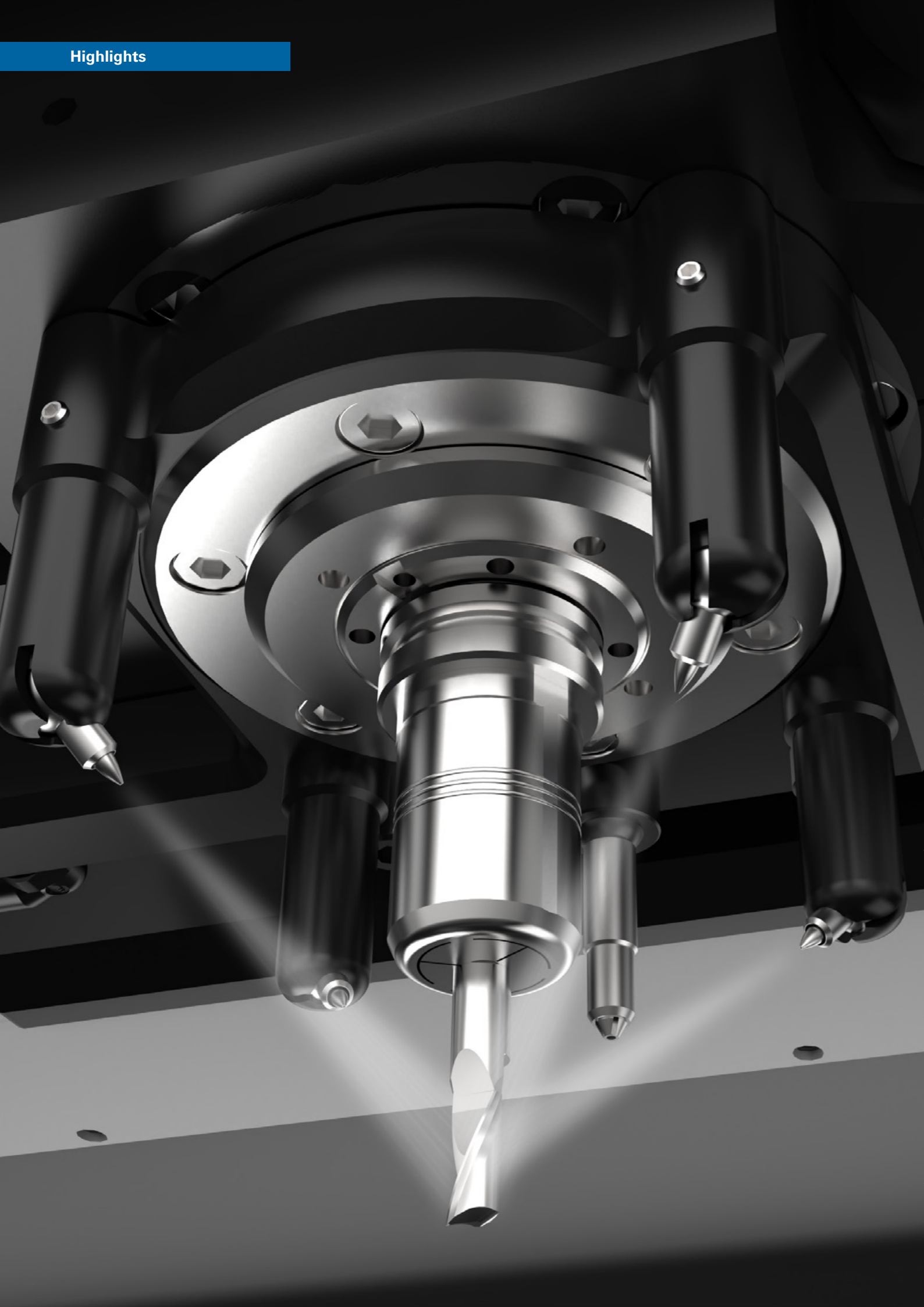
DATRON ToolAssist

□ The machine can be precisely tailored to a wide range of materials by selecting the right options. Features such as the minimum quantity lubrication (MQL) system, DATRON CleanCut, and the ionization bar ensure clean and controlled machining of non-ferrous metals, mark-free plastics, or dust-generating materials. This guarantees reliable and consistent machining across diverse material types.

□ The machine also features modular tool magazine solutions. For compact workspaces, an integrated tool changer is available, while the external DATRON ToolAssist is ideal for industrial production, offering high capacities and the ability to load tools during operation. This keeps the work area open and clear, whether you are producing individual components or nested parts.

With additional options, such as suction systems, sensors, or automation solutions, the system can evolve with every new requirement. Each upgrade integrates seamlessly into the overall concept, allowing for long-term scalability and retrofit ability, making the machine future-proof. This gives you the freedom to start small and expand as needed. Your requirements determine the machine configuration, not the other way around.





DATRON

EFFICIENT & SUSTAINABLE

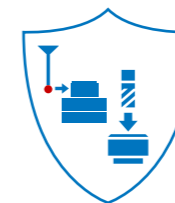
DATRON Thinks of Milling as a Whole

DATRON CNC milling machines deliver maximum efficiency while consuming minimal resources. Thanks to their intelligent technology and thoughtfully engineered design, they enable efficient and sustainable manufacturing, boosting productivity while keeping operating costs low, an investment that pays off with every part.



Low Operating Costs & Low Power Consumption

With energy efficient spindles, short setup times, and a simple workflow, DATRON machines reduce energy consumption while lowering operating costs, enabling sustainable and efficient manufacturing.



High Level of Reliability

The optional DATRON 3D probe and tool length sensors deliver micron precision and consistent repeatability, enabling processes that exceed your production demands saving you money.



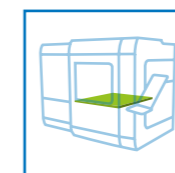
Short Cycle Times

Thanks to their highly dynamic and responsive machine axes, DATRON machines speed up your manufacturing cycle, delivering faster results and higher throughput.



Residue-Free Machining

The minimum quantity lubrication (MQL) system, with optional ethanol cooling, ensures residue-free machining while minimizing coolant use for clean and sustainable production.



Footprint vs. Machining Area

DATRON machines are compact yet space-efficient, providing a generous machining area within a small footprint, along with an ergonomic, fully integrated working environment.

DATRON MACHINE OVERVIEW

Every application is unique, and we provide the ideal solution to meet your specific needs. Whether it's 3, 3+1, or full 5-axis machining, exceptional precision, or outstanding cost efficiency, our experts are ready to advise you and help identify the most effective solution for your application.

DATRON **neo**



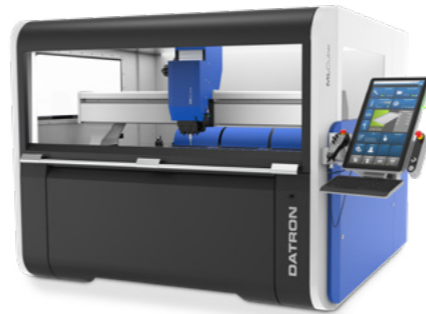
» More Informations

DATRON **M8Cube**



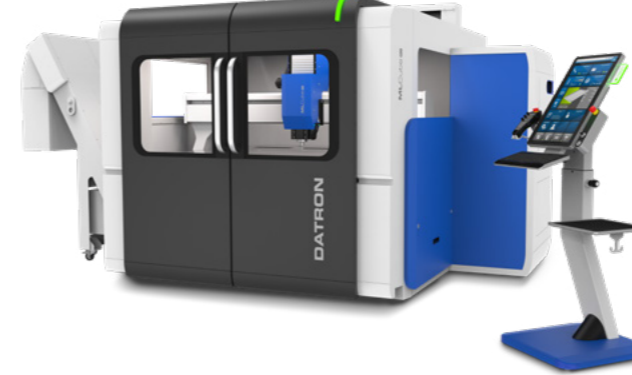
» More Informations

DATRON **MLCube**



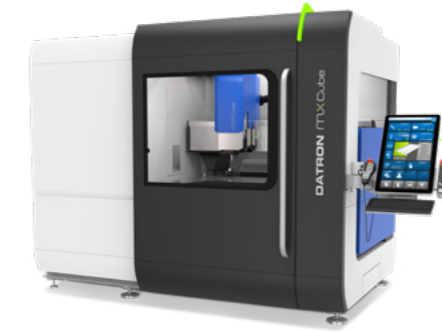
» More Informations

DATRON **MLCube Pro**



» More Informations

DATRON **MXCube**



» More Informations

& **ERGONOMIC DYNAMIC**

& **PRODUCTIVE VERSATILE**

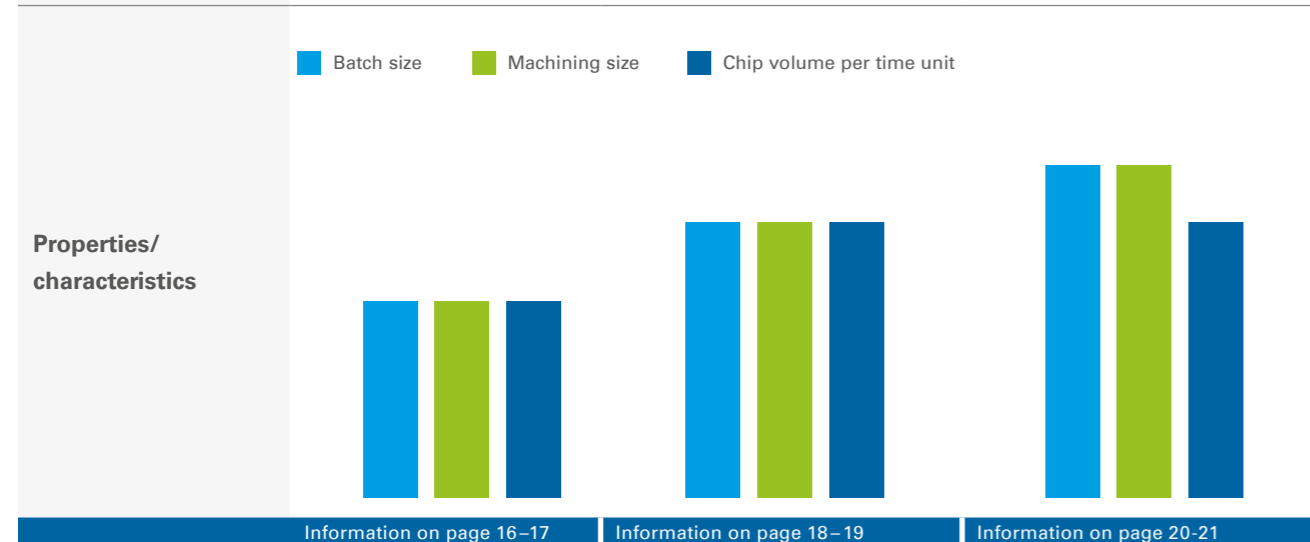
& **LARGE-FORMAT EFFICIENT**

& **LARGE-FORMAT PRODUCTIVE**

& **PROCESS RELIABILITY POWERFUL**

Axis	3+1	3+2	3+1
Traverse path (XxY)	500 mm x 400 mm	1,000 mm x 700 mm	1,500 mm x 1,000 mm
Portal passage (Z)	175 mm	200 mm	200 mm
Spindles	2.0 kW HF spindle up to 40,000 rpm Direct shank	1.8 kW–4.0 kW HF spindle up to 60,000 rpm Direct shank or HSK-E 25	1.8 kW–4.0 kW HF spindle up to 60,000 rpm Direct shank or HSK-E 25
Feed/Positioning feed	Up to 28 m/min	Up to 22 m/min	Up to 22 m/min

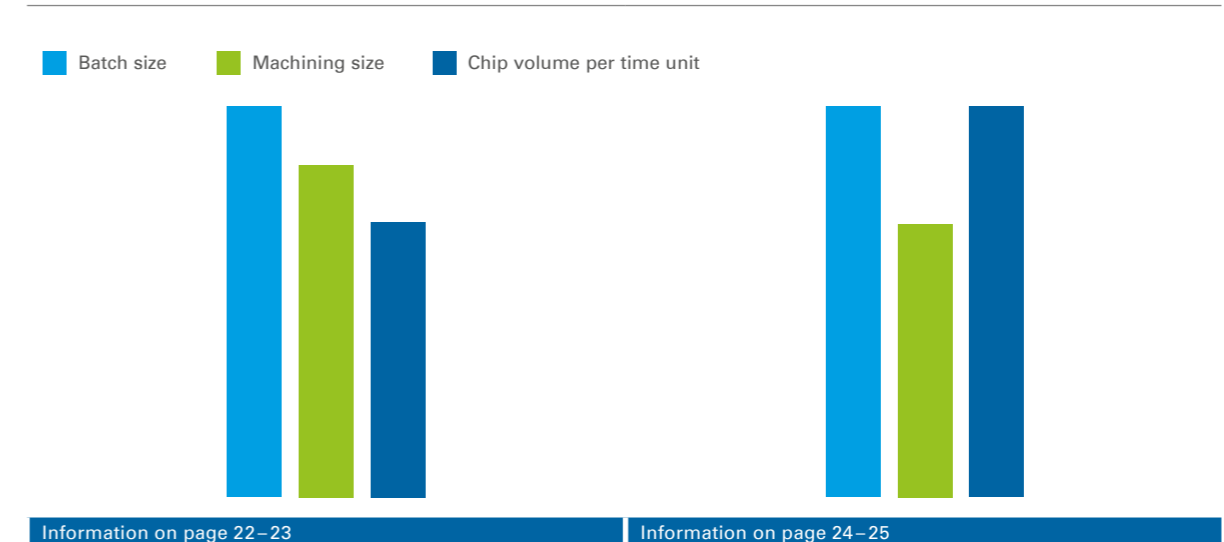
Axis	3+1	3+2
Traverse path (XxY)	1,500 mm x 1,000 mm	1,000 mm x 700 mm
Portal passage (Z)	200 mm	205 mm
Spindles	3.0 kW–4.0 kW HF spindle up to 40,000 rpm HSK-E 25	4.0 kW–8.0 kW HF spindle up to 40,000 rpm HSK-E-25 or HSK-E-32
Feed/Positioning feed	Up to 22 m/min	Up to 40 m/min



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Information on page 24–25

DATRON neo

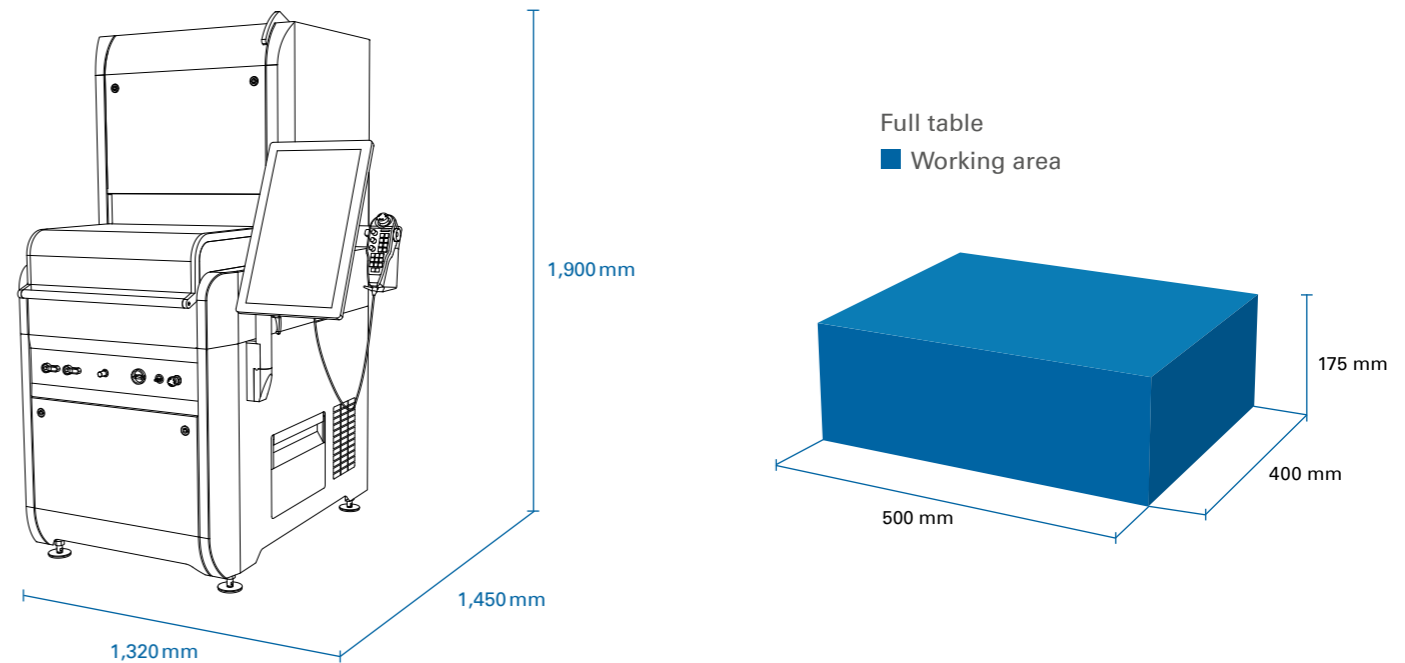
DATRON neo Family - Rethink CNC Milling: The Perfect Start — No Matter Your Experience

Whether you're just getting started or you're scaling up complex production, the DATRON neo family offers the right solution for every stage. With three models — DATRON neo Entry, DATRON neo, and DATRON neo Pro — high-speed milling is now more accessible, intuitive, and efficient than ever before. From an entry-level machine to a fully featured professional system, every DATRON neo model delivers precise results, easy operation, and maximum flexibility, all within a compact footprint. Powered by the innovative DATRON next control interface, true plug-and-play setup, and a modern, future-ready design, the DATRON neo series is built to meet the demands of today's production environments. Start Simple. Scale Fast. Succeed — with the DATRON neo.



» More Informations

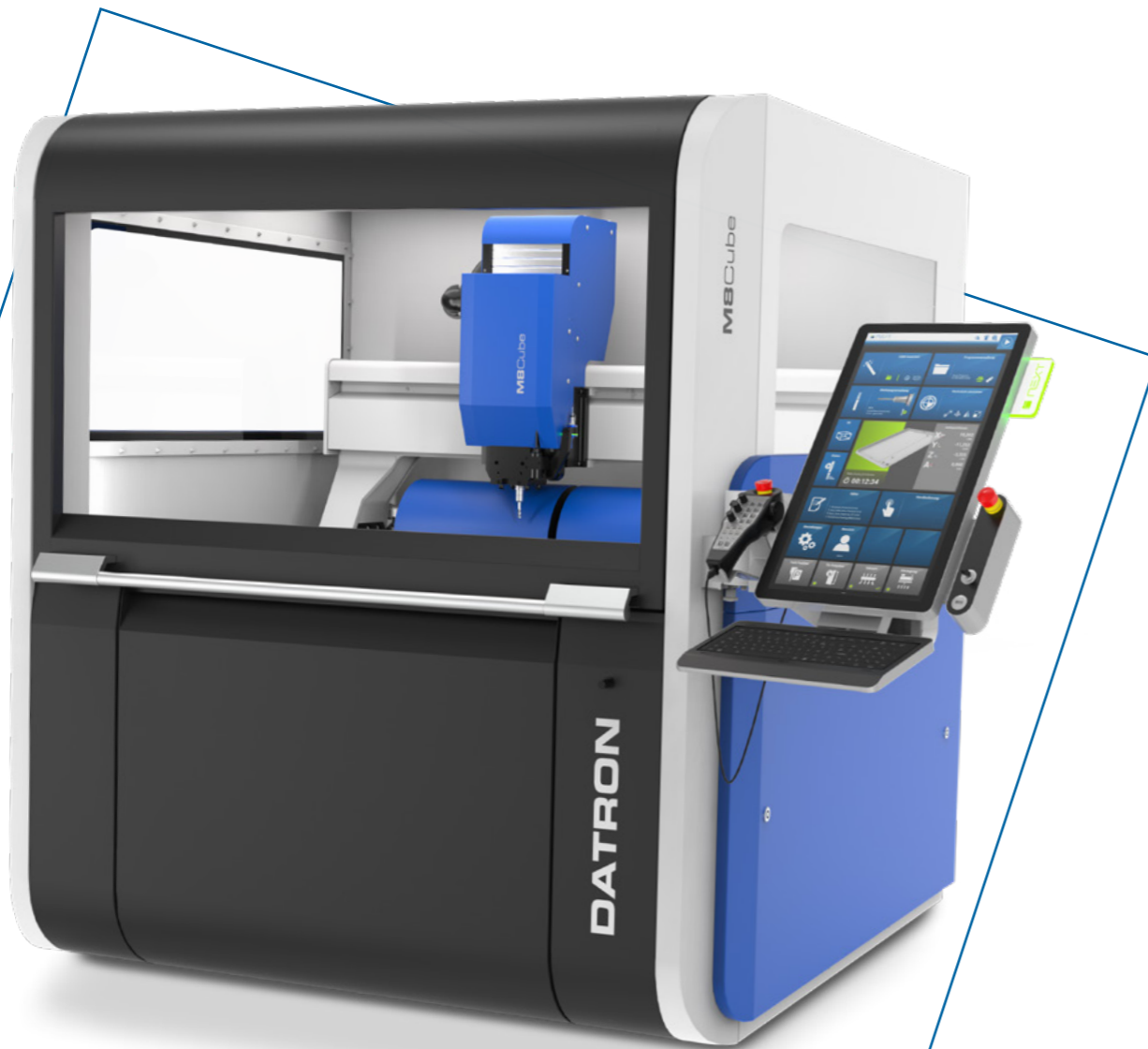
Technical Data



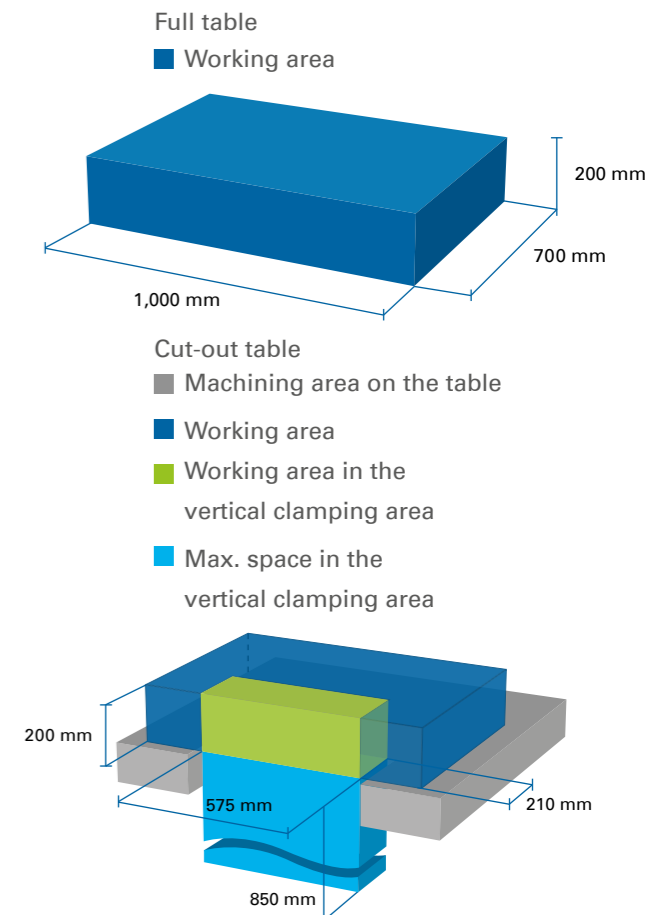
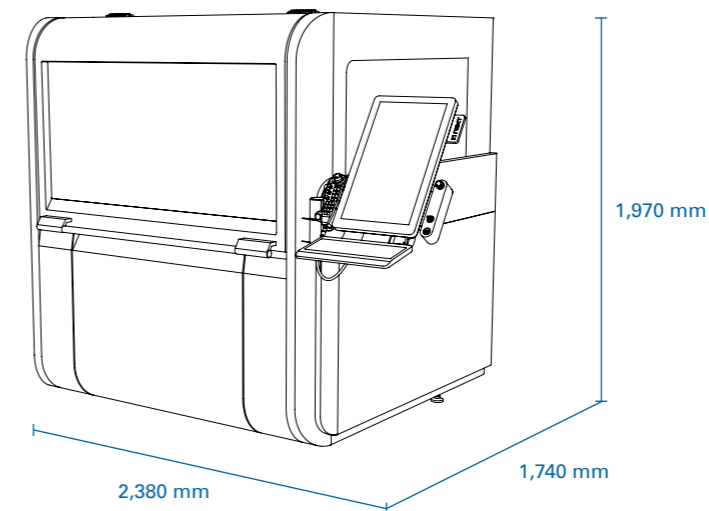
	DATRON neo Entry	DATRON neo	DATRON neo Pro
Traverse path (XxYxZ)	520 mm x 420 mm x 220 mm		
Working area (XxYxZ)	500 mm x 400 mm x 175 mm (Z = portal passage)		
Machining spindle	1.0 kW HF spindle; direct shank	2.0 kW HF spindle; direct shank	
Spindle Speed	up to 27,000 rpm	up to 40,000 rpm	
Tool magazine	12 stations tool-holding fixture with tool length probe (optional)	24 stations tool-holding fixture and integrated tool length probe	
Machining table	Mineral-cast portal construction and machine bed, aluminum table, steel stand	Portal construction UHPC, mineral-cast machine bed, aluminum table, steel stand	
Control system/software	DATRON next Entry (no additional software options available)	DATRON next	
Operating terminal	24" multi-touch screen with user-friendly hand-held control unit		
Component measurement	3D probe Entry (optional)	DATRON 3D probe	
Minimum-quantity cooling lubrication system	2,5 liters coolant tank; 2-nozzles spray ring	5 or 10 liters coolant tank; 2-nozzles spray ring	
Linear absolute encoders	-	-	All axes
Positioning feed	Up to 12 m/min	Up to 28 m/min	
Feed	Up to 12 m/min	Up to 28 m/min	
Installation dimensions with operating terminal (WxDxH)	1,320 mm x 1,300 mm x 1,880 mm	1,320 mm x 1,450 mm x 1,900 mm	
Installation dimensions without operating terminal (WxDxH)	805 mm x 1,300 mm x 1,880 mm	805 mm x 1,450 mm x 1,900 mm	
Weight	Approx 700 kg	Approx 740 kg	

DATRON M8Cube

The DATRON M8Cube is the ideal solution for cost-efficient machining of aluminum housings, profiles, and front panels. It also machines other non-ferrous metals and composite materials with exceptional efficiency. With short setup times, very low energy consumption, and an outstanding price-to-performance ratio – even with small batch sizes – the DATRON M8Cube delivers exceptional economy and productivity.



Technical Data

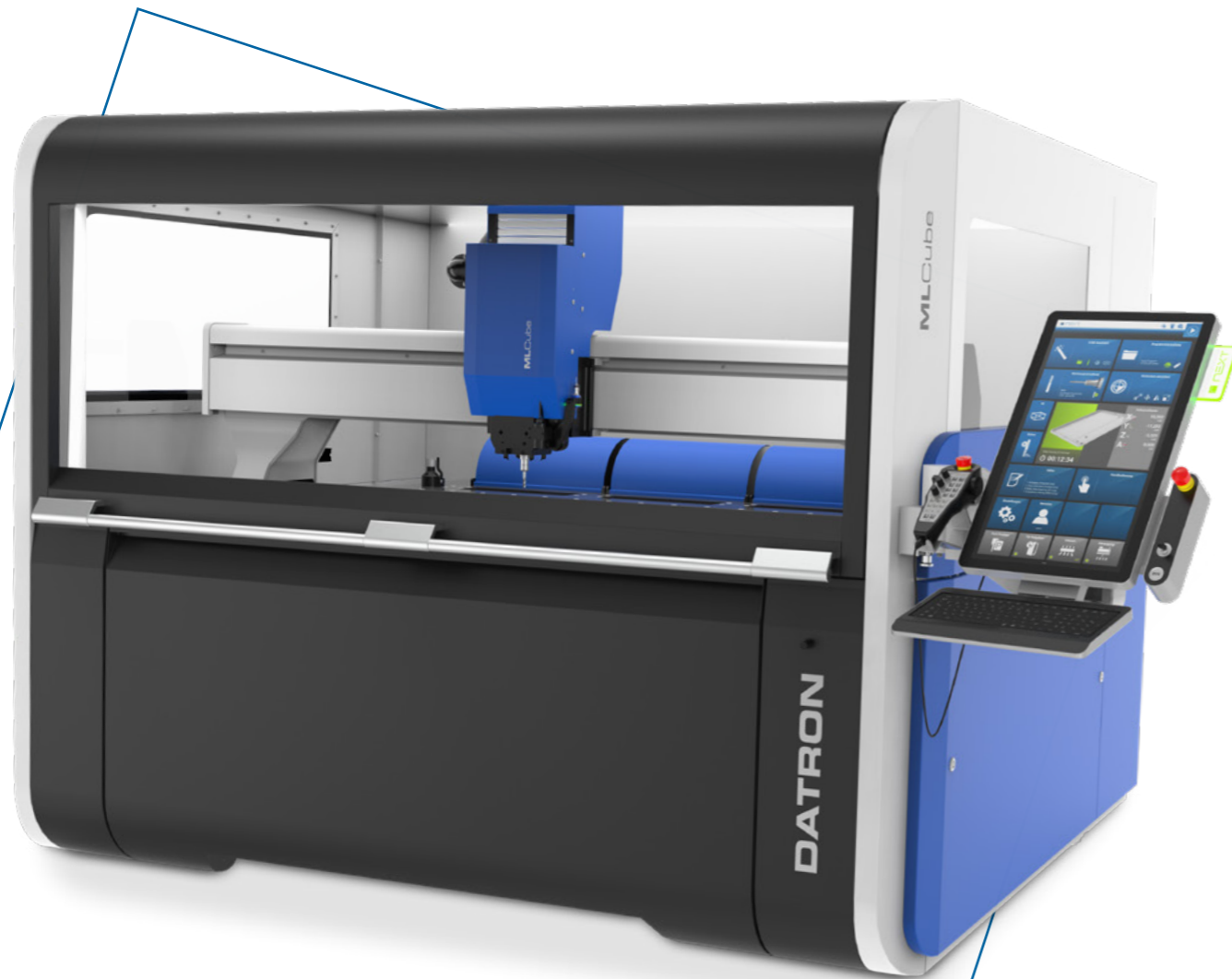


	DATRON M8Cube	DATRON M8Cube LS
Traverse path (XxYxZ)	1,020 mm x 830 mm x 245 mm	
Working area (XxYxZ)	1,000 mm x 700 mm x 200 mm (Z = portal passage)	
Machining spindle	1.8kW–4.0 kW HF spindle, up to 60,000 rpm; direct shank or HSK-E 25	
Tool magazine	DATRON ToolAssist 60 or 143 stations with HSK-E 25 5 stations with HSK-E 25 tool-holding fixture (10 stations optional) 12 stations with HSK-E 25 tool-holding fixture (24 stations optional) 15 stations with direct shank tool-holding fixture (30 stations optional) with integrated length sensor	
Machining table	Mineral-cast machine bed; integrated conical thread; full or cut-out table	
Control system/software	DATRON next	
Operating terminal	24" multi-touch screen with user-friendly hand-held control unit	
Component measurement	DATRON 3D probe (optional)	
Rotary axis	DATRON Axis4; Axis5 (optional)	
Minimum-quantity cooling lubrication system	10 liters or 2x 10 liters coolant tank; 4-nozzles spray ring	
Linear encoders x/y	-	✓
Positioning feed	Up to 22 m/min	
Feed	Up to 22 m/min	
Installation dimensions with operating terminal (WxDxH)	2,380 mm x 1,740 mm x 1,970 mm	
Installation dimensions without operating terminal (WxDxH)	1,740 mm x 1,740 mm x 1,970 mm	
Weight	Approx. 1,300 kg	

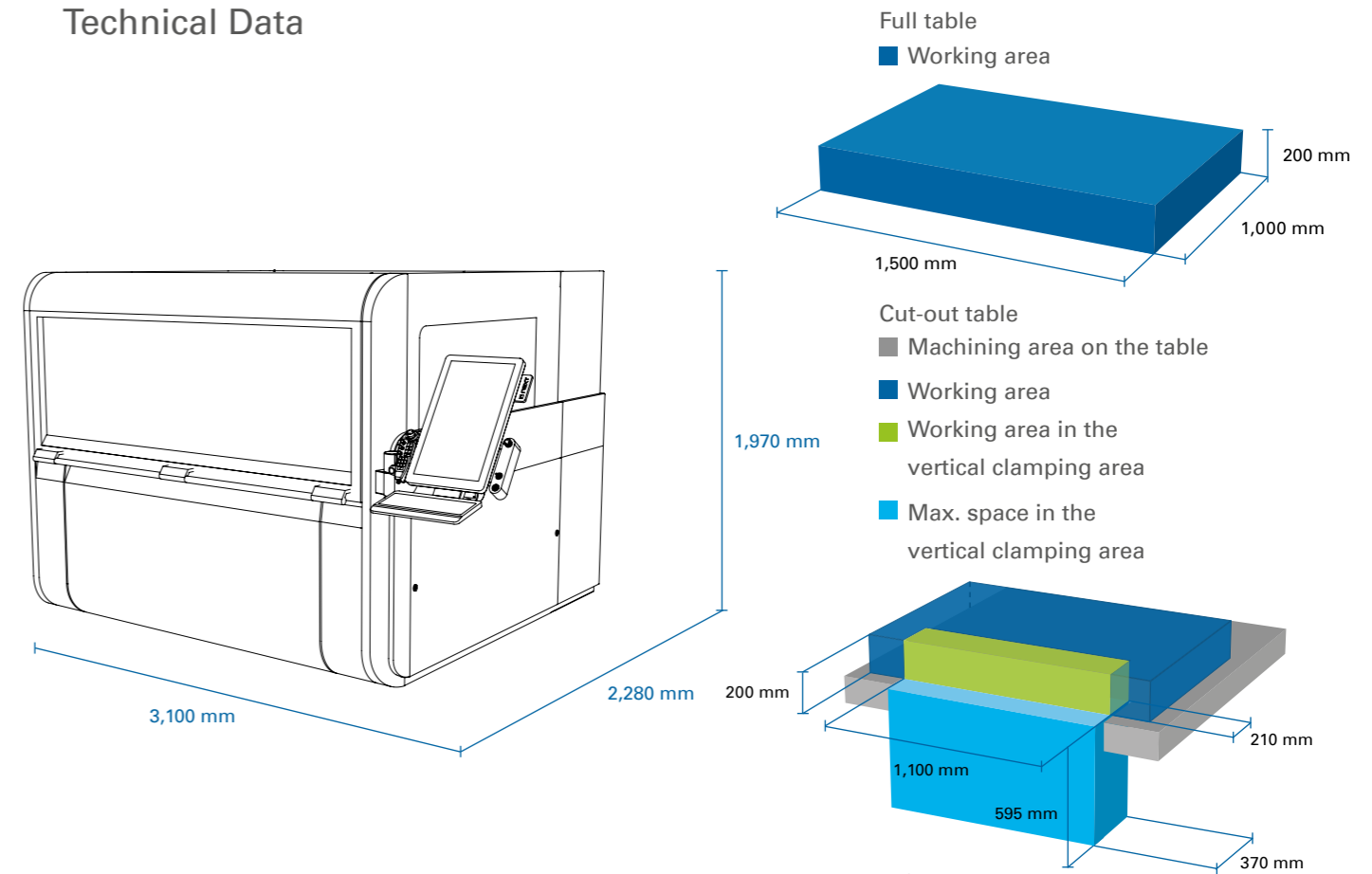
» More Informations

DATRON MLCube

The DATRON MLCube is the ideal solution for cost-efficient sheet machining, such as producing front panels, housings, profiles and other aluminum workpieces milled from sheet material. Other non-ferrous metals and composite materials can also be machined with exceptional efficiency. Short setup times, the ability to use multiple clamping systems simultaneously, very low energy consumption and an outstanding price-to-performance ratio – even for small batch sizes – make the DATRON MLCube an extremely flexible and economical choice for years of reliable production.



Technical Data

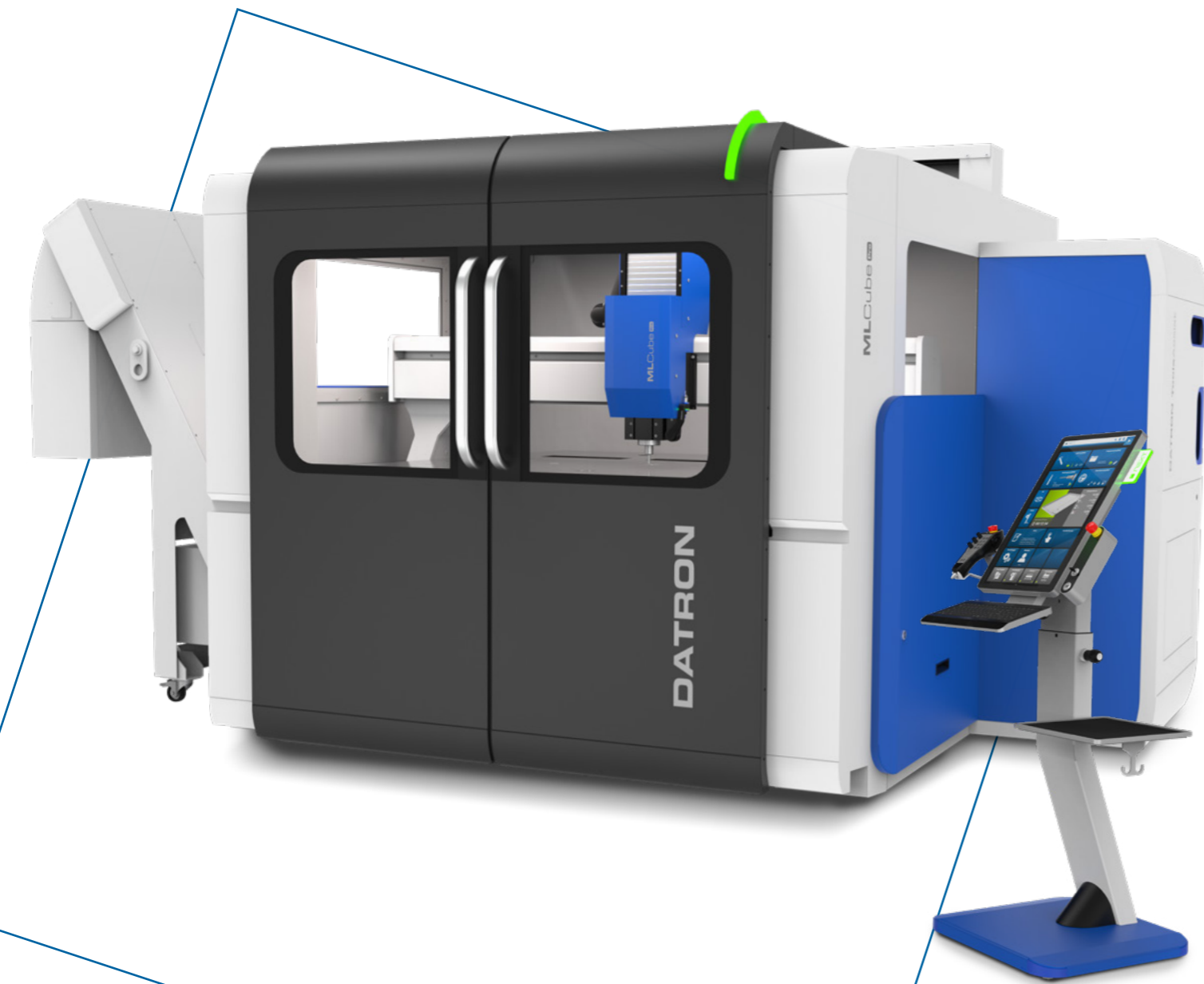


	DATRON MLCube	DATRON MLCube LS
Traverse path (XxYxZ)	1,520 mm x 1,150 mm x 245 mm	
Working area (XxYxZ)	1,500 mm x 1,000 mm x 200 mm (Z = portal passage)	
Machining spindle	1.8 kW – 4.0 kW HF spindle up to 60,000 rpm; direct shank or HSK-E 25	
Tool magazine	DATRON ToolAssist 60 or 143 stations with HSK-E 25 5 stations with HSK-E 25 tool-holding fixture (10 stations optional) 12 stations with HSK-E 25 tool-holding fixture (24 stations optional) 15 stations with direct shank tool-holding fixture (30 stations optional) with integrated length sensor (optional)	
Machining table	Mineral-cast machine bed; integrated conical thread; full or cut-out table	
Control system/software	DATRON next	
Operating terminal	24" multi-touch screen with user-friendly hand-held control unit	
Component measurement	DATRON 3D probe (optional)	
Rotary axis	DATRON Axis4 (optional)	
Minimum-quantity cooling lubrication system	10 liters or 2x 10 liters coolant tank; 4-nozzles spray ring	
Linear encoders x/y	-	✓
Positioning feed	Up to 22 m/min	
Feed	Up to 22 m/min	
Installation dimensions with operating terminal (WxDxH)	3,100 mm x 2,280 mm x 1,970 mm	
Installation dimensions without operating terminal (WxDxH)	2,420 mm x 2,280 mm x 1,970 mm	
Weight	Approx. 2,500 kg	

» More Informations

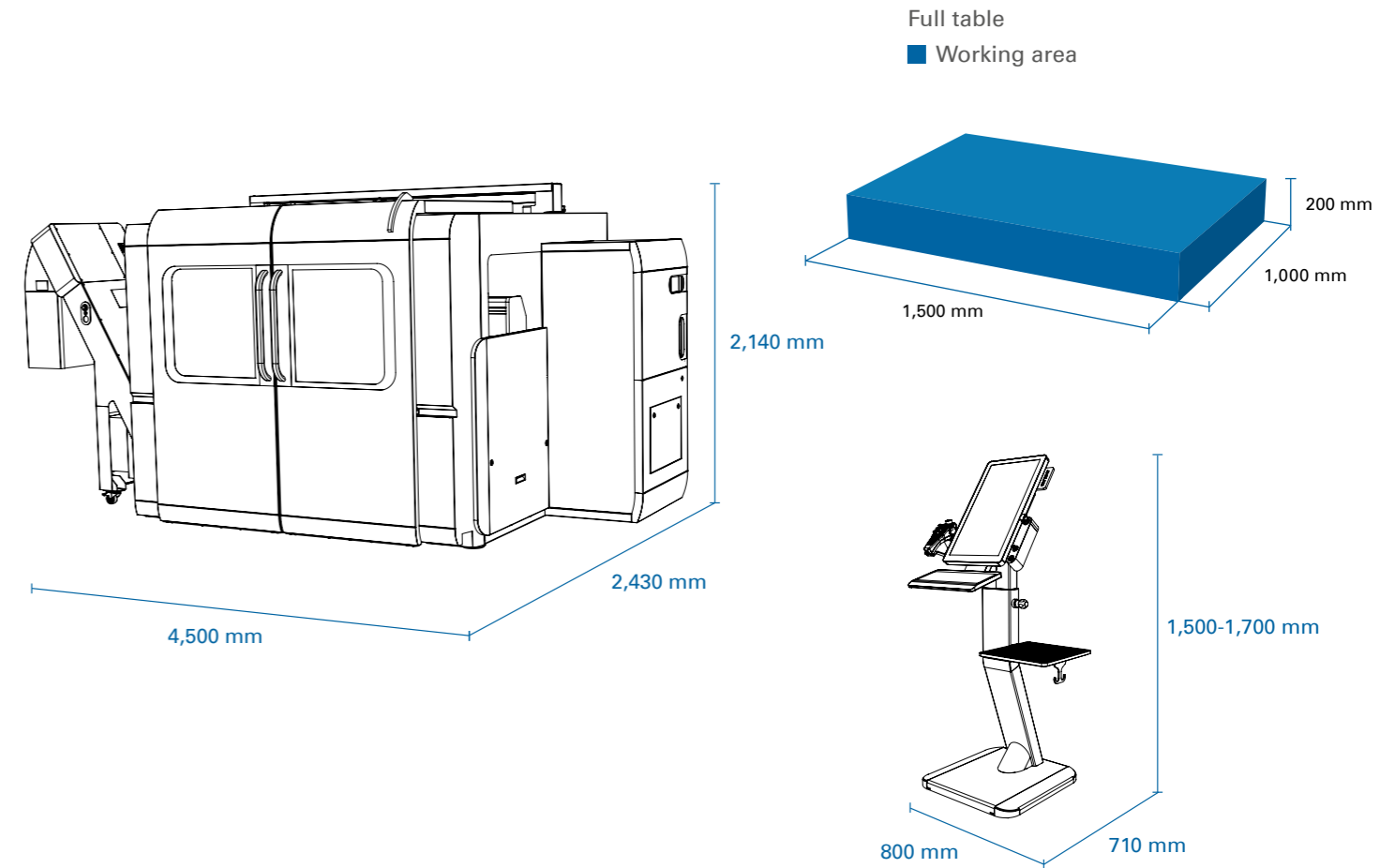
DATRON MLCube Pro

The DATRON MLCube Pro is the premium model in the DATRON MLCube series and is designed for customers with high material removal requirements. It features an enhanced loading concept with automatic sliding doors and crane-loading capability. An optimized chip management system, including an additional chip conveyor, ensures efficient chip removal. The external DATRON ToolAssist tool changer enables tools to be loaded and unloaded in parallel during machine operation. As a result, the DATRON MLCube Pro delivers high performance and exceptional efficiency for industrial production.



» More Informations

Technical Data

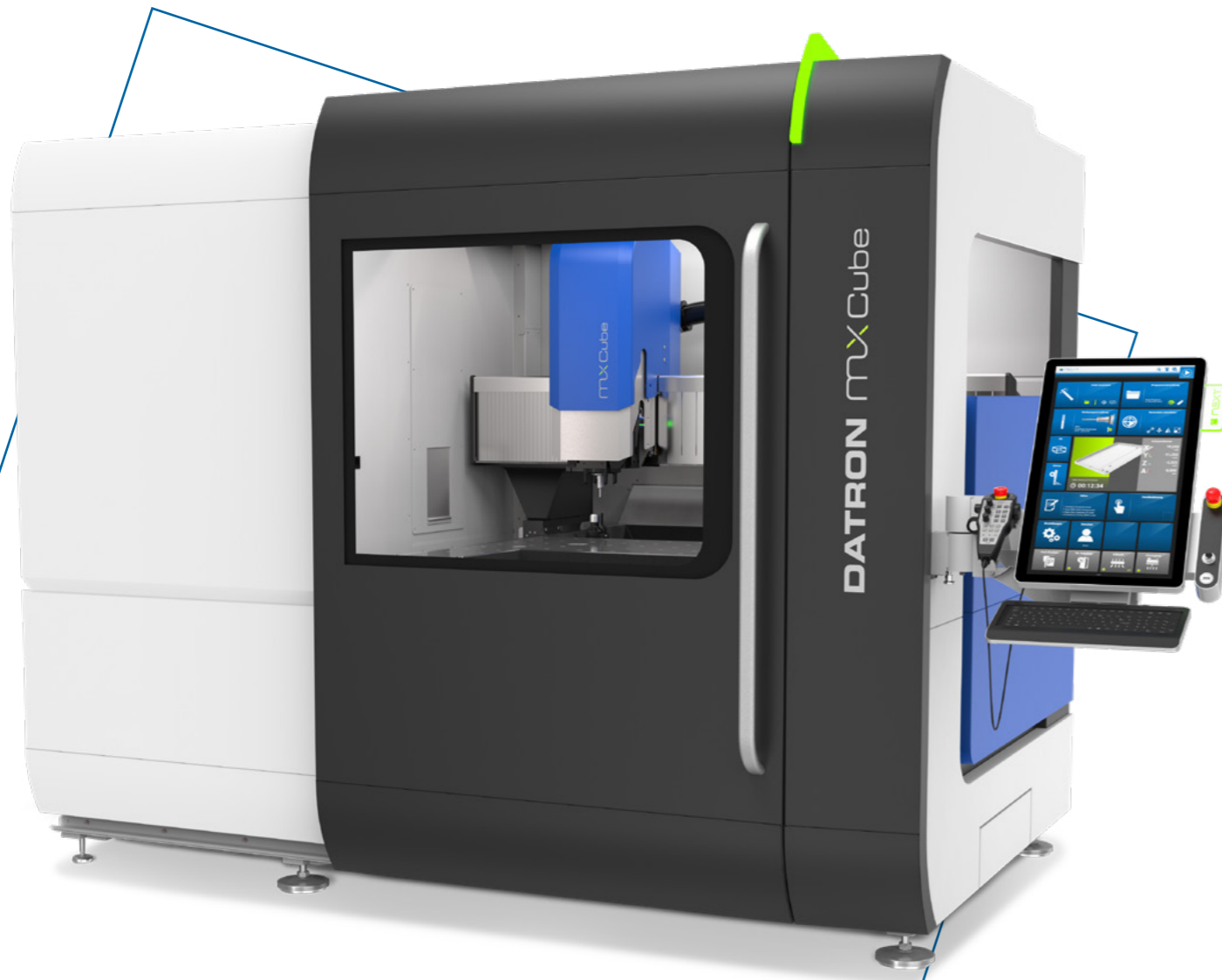


DATRON MLCube Pro

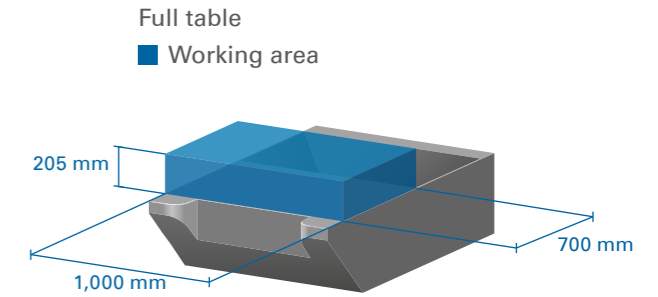
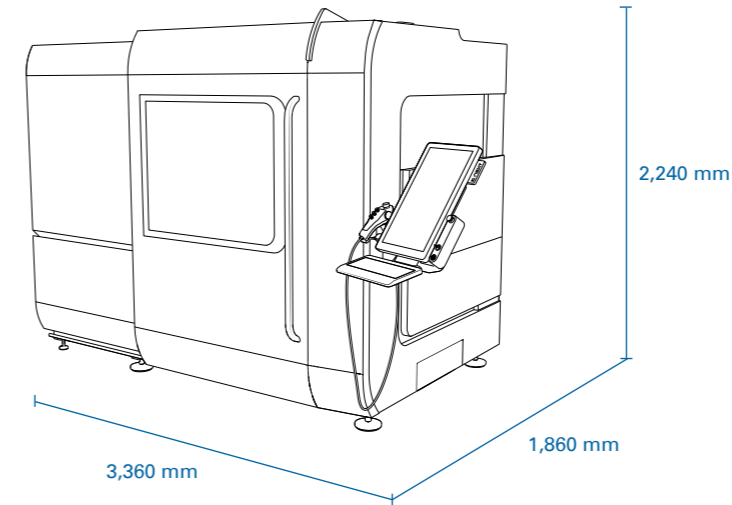
Traverse path (XxYxZ)	1,520 mm x 1,150 mm x 245 mm
Working area (XxYxZ)	1,500 mm x 1,000 mm x 200 mm (Z = portal passage)
Machining spindle	3.0 kW–4.0 kW HF spindle up to 40,000 rpm; HSK-E 25
Tool magazine	DATRON ToolAssist 60 or 143 stations with HSK-E 25 with integrated length sensor (optional)
Machining table	Mineral-cast machine bed; integrated conical thread; full or cut-out table
Control system/software	DATRON next
Operating terminal	24" multi-touch screen with user-friendly hand-held control unit
Component measurement	DATRON 3D probe (optional)
Rotary axis	DATRON Axis4 (optional)
Minimum-quantity cooling lubrication system	10 liters or 2x 10 liters coolant tank; 4-nozzles spray ring
Linear encoders x/y	✓
Positioning feed	Up to 22 m/min
Feed	Up to 22 m/min
Installation dimensions without operating terminal (WxDxH)	4,500 mm x 2,430 mm x 2,140 mm
Installation dimensions stand-alone operating terminal (WxDxH)	800 mm x 710 mm x 1,500-1,700 mm
Weight	Approx. 3,200 kg

DATRON MXCube

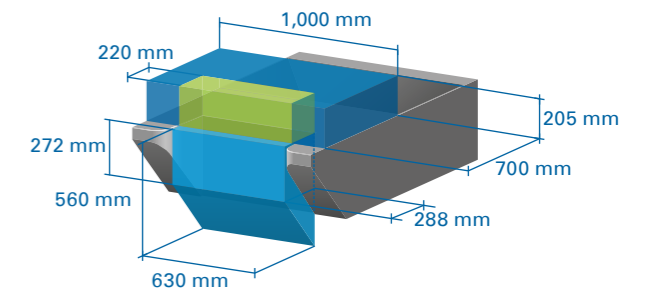
With the DATRON MXCube we introduce the premium class of our high-speed gantry machines. Its rigid structure, exceptional dynamics and powerful high-frequency spindle make it ideal for modern high-speed cutting (HSC) strategies, high machining volumes, and outstanding surface finishes. The completely redesigned machine, featuring an optimized chip management concept, offers a wide range of functions tailored for reliable operation in demanding industrial environments.



Technical Data



- Full table
- Working area
- Cut-out table
- Machining area on the table
- Working area
- Working area in the vertical clamping area
- Max. space in the vertical clamping area



	DATRON MXCube 4 kW	DATRON MXCube 8 kW
Traverse path (XxYxZ)	1,040 mm x 850 mm x 270 mm	
Working area (XxYxZ)	1,000 mm x 700 mm x 205 mm (Z = portal passage)	
Machining spindle	4.0 kW HF spindle up to 40,000 rpm; HSK E-25	8.0 kW HF spindle up to 34,000 rpm; HSK E-32
Tool magazine	DATRON ToolAssist 60 or 143 stations	DATRON ToolAssist 60 or 110 stations
Machining table	Mineral-cast machine bed; integrated conical thread; full or cut-out table	
Control system/software	DATRON next	
Operating terminal	24" multi-touch screen with user-friendly hand-held control unit	
Component measurement	DATRON 3D probe (optional)	
Rotary axis	DATRON Axis4; Axis5 (optional)	
Minimum-quantity cooling lubrication system	10 liters or 2x 10 liters coolant tank; 4-nozzles spray ring	
Linear absolute encoders	All axes	
Positioning feed	Up to 40 m/min	
Feed	Up to 40 m/min	
Installation dimensions with operating terminal (WxDxH)	3,360 mm x 1,860 mm x 2,240 mm	
Installation dimensions without operating terminal (WxDxH)	2,700 mm x 1,860 mm x 2,240 mm	
Weight	ca. 3,800 kg	

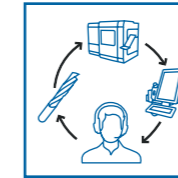
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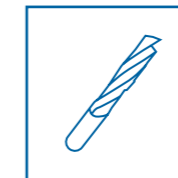
EFFICIENCY WITH SYSTEM

Developed by DATRON. Made for your Success.



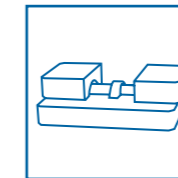
Technology & Process Support

- Your part, our know-how.
- Customized strategies for your application.
- Technology consulting that delivers measurable results.



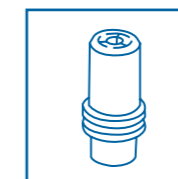
DATRON Milling Tools

- Optimized for DATRON milling systems, achieving top performance.
- Individual special-purpose tool solutions designed to meet your specific demands and improve your process.
- **Made in Germany:** Precision, quality & reliability.



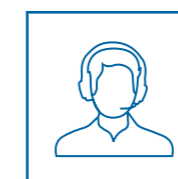
Accessories

- Precision starts with using the correct clamping.
- Flexible. Quick. Repeat accuracy.
- Efficient accessory solutions for any application.



Tool Clamping Technology

- Precision clamping guarantees maximum stability and repeatable results.
- Optimized geometry minimizes vibration, enhancing surface quality and extending tool lifespan.
- Intuitive handling saves time and reduces setup errors.



Services

- Expertise on your doorstep.
- Quick. Competent. Directly from the manufacturer.
- Maintenance, calibrations & training.
- Service that keeps your production running.

Log in via the Service Helpdesk now!
www.datron.de/helpdesk

» More Informations

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