



## DATRON M25

- Compact machining system at a favourable price
- Aluminium machining table
- Wide application range

**Machining area (X x Y x Z) [mm]: 500 x 500 x 240**

**Feed rate and positioning feed [m/min]: 10**



## DATRON M7

- Compact HSC machining system
- Massive Granite machining table
- High machining accuracy

**Machining area (X x Y x Z) [mm]: 500 x 500 x 240**

**Feed rate and positioning feed [m/min]: 16**



## DATRON M35

- Low-cost and effective CNC high-speed machining
- Solid Steel/Polymer construction
- Large machining area, e.g. for nesting and the machining of panels

**Machining area (X x Y x Z) [mm]: 1020 x 700 x 240**

**Feed rate and positioning feed [m/min]: 16**



## DATRON M8

- Powerful and versatile CNC machining
- Solid Steel/Polymer construction
- High machining accuracy and speed

**Machining area (X x Y x Z) [mm]: 1020 x 700 x 240**

**Feed rate and positioning feed [m/min]: X,Y = 20**



## DATRON M8XL-1600

- Large-format CNC machining system
- Solid Steel/Polymer construction; vibration-damped set-up
- Designed for the effective machining of panels and extrusions

**Machining area (X x Y x Z) [mm]: 1020 x 1520 x 240**

**Feed rate and positioning feed [m/min]: X = 20; Y = 16; Z = 8**



## DATRON M8XL-2500

- CNC machining system for large-format panels and extrusions
- Solid Steel/Polymer construction
- Modular enclosure system available

**Machining area (X x Y x Z) [mm]: 1020 x 2500 x 240**

**Feed rate and positioning feed [m/min]: X = 20; Y = 16; Z = 8**



### High-frequency spindle **0.6 kW**

Article number: 0A01053H

Output Power: 0.6 kW - Revolutions: up to 60,000 rpm

Precision high-speed spindle with direct shaft clamping up to a tool's diameter of 6 mm.



### High-frequency spindle **2.0 kW**

Article number: 0A01053G

Output Power: 2.0 kW - Revolutions: up to 60,000 rpm

Powerful high-speed spindle with direct shaft clamping. Tool's diameter of up to 8 mm.



### HSK-E 25 spindle **1.8 kW**

Article number: 0A01053I

Output Power: 1.8 kW - Revolutions: up to 50,000 rpm

High-speed spindle for HSK-E 25 taper change.



### HSK-E 32 spindle **4.5 kW**

Article number: 0A01053K

Output Power: 4.5 kW - Revolutions: up to 42,000 rpm

High-speed spindle for HSK-E 32 taper change.



### Cooling Unit necessary for spindles 1.8 kW, 2.0 kW and 4.5 kW

Article number: 0A01054H

For constant operating temperature and long service life.



### M7 Tool change

Article number: 0A01112C

Tool quantity: 5-fold  
with length sensor



### Tool change

Article number: 0A01110 or 0A01111

Tool quantity: 10- or 20-fold  
with length sensor



### HSK-E 25/E 32 Tool change

Article number: 0A01113A or 0A01113C

Tool quantity: 5-fold  
with cover and length sensor

The cover optimally protects the tools from spans.



### Tool change

Article number: 0A01112 or 0A01112A

Tool quantity: 15- or 30-fold  
with cover and length sensor

The cover optimally protects the tools from spans.

NEW

**DATRON**

CNC Machining Systems

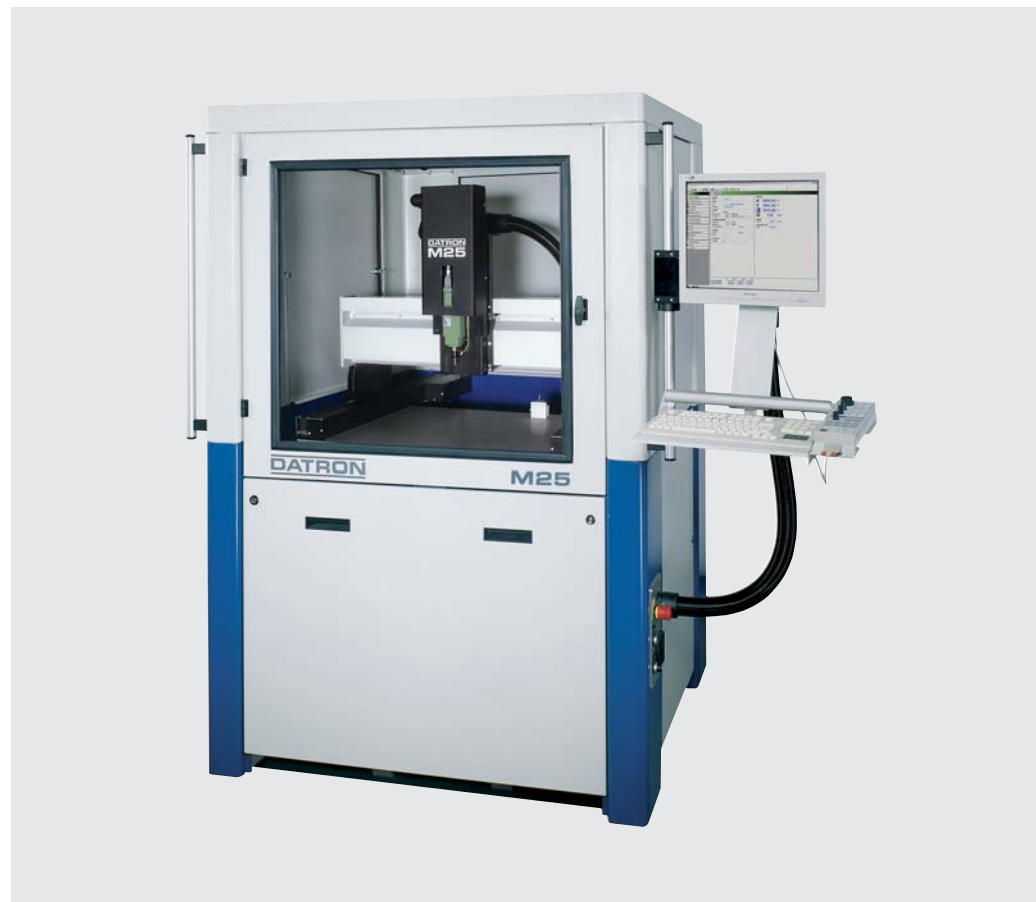
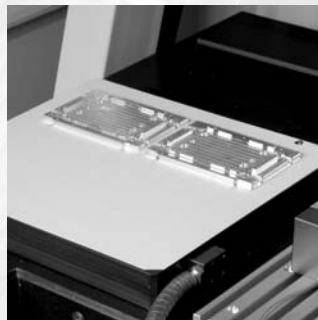
Mini Tools

Dispensing Systems

Positioning Drive Units

Consultation and Training

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N Insert nach Kurser
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28 A Axye 0, -2.436, 3.173, -16.625, C
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## DATRON M25

**Compact, Versatile, and Inexpensive**

**High-Performance and Cost-Effective CNC Machining**

- Working Area 500 mm x 500 mm x 240 mm
- Microsoft® Windows® based CNC Programming System
- Efficient Accessories

**Inexpensive and yet efficient**

the M25 machining system offers sound CNC technique for a great range of applications at a favourable price. The machining table with its solid Aluminium base plate is already configured for the DATRON module clamping elements. As a machining spindle, a robust and low-cost spindle with a manual tool change unit up to 30.000 rpm is available.



**Equipment**

The standard equipment of the M25 CNC system consists of:

- aluminium coordinate table with steel protective cover
- 3D CNC control system for three to six axes
- LCD monitor 17" with standard PC
- network, CD and USB 2.0 for data exchange
- Microsoft® Windows® based CNC control software
- tool length sensor
- machining spindle 600 W



**Accessories (Option)**

DATRON offers a large variety of accessories. Find out more in the DATRON accessories catalogue.

- Clamping systems: manual, pneumatic, vacuum
- High-speed tools
- CAD/CAM and 3D engraving software
- Hand-held control unit

**Advantages and Areas of Applications**

- Inexpensive and robust
- Quick 3D Windows® control system
- Machining of Plastics in 2D and 3D
- Milling and drilling of non-ferrous metals
- Small floor space

Technical Data	DATRON M25
Coordinate table	Solid Aluminium table on Steel base, portal set-up with double-sided Y-drive
Machining Area (X x Y x Z)	500 x 500 x 240 mm
Portal Height	200 mm
Clamping Area	700 mm x 500 mm (X, Y)
Floor Space	1300 mm x 1300 mm x 1950 mm (W x D x H)
Driving System	Digital Servo drives
Lubrication and Cooling System	Minimal quantity lubrication, electronically adjustable dispensing
Machining Spindle	600 W powerful, robust machining spindle with up to 30.000 rpm
Control System	quick digital servo control system with Microsoft® Windows® control software
Feed Rate and Positioning Feed	up to 10 m/min
Weight	approx. 720 kg

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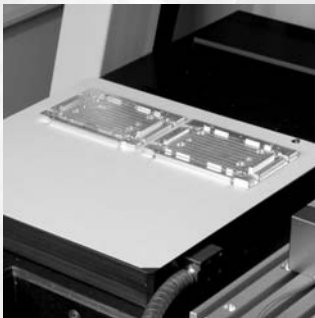
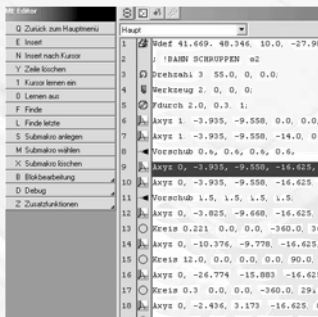
CNC Machining Systems

Mini Tools

Dispensing Systems

Positioning Drive Units

Consultation and Training



## DATRON M7 Compact

High-Performance HSC Machining System at a Favourable Price

Precise and Economic Milling, Drilling, and Engraving of Aluminium, Deep Drawing, Ureol, Thermoforming, Acrylic, GFRP and CFRP workpieces

- Working Area and Positioning Feed up to 16 m/min
- Fully Enclosed Machining Area
- Working Area 500 mm x 500 mm x 240 mm



**HighestSpeed and Precision when Milling, Drilling, and Engraving with Small Tools -**

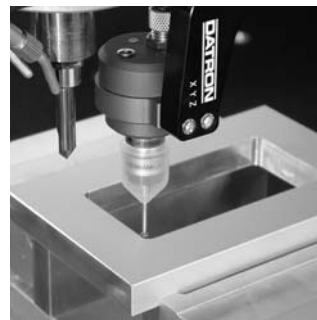
the new DATRON machining system M7 will substantially increase your machining speed and quality. With a floor space of only 1300 mm x 1300 mm this compact machine offers a machining area of 500 mm x 500 mm x 240 mm. The solid granite construction ensures very dynamic CNC milling and at the same time high surface quality. Robust high-torque machining spindles or precision spindles up to 60.000 rpm are available, tailored to your application requirements. With this compact and low-priced "power house" the precise machining of Aluminium and Plastics in 2D or 3D can now be carried out much more effectively and economically.



**Equipment**

The standard equipment of the M7 CNC system consists of:

- a solid granite coordinate table in a steel protective cover
- quick 3D CNC control system for three to six axes
- Monitor 17" with standard PC
- network, CD and floppy disk for data exchange
- program-controlled minimal quantities tool lubrication and cooling system
- menu-based CNC programming software winCNC



**Accessories (Option)**

DATRON offers a wide range of accessories. Find out more about it in DATRON's accessories catalogue.

- Clamping systems: manual, pneumatic, vacuum
- Electronic Z-correction with XY touch probe
- High-speed tools
- CAD/CAM and 3D engraving software

**Advantages and Areas of Application**

The high dynamics and speed allow for a versatile use in industrial series production:

- 2D and 3D engravings, of also Steel and Stainless Steel
- Fast 3D prototyping in all conventional materials
- Efficient machining of small-format Aluminium workpieces
- High-speed machining of frontpanels and housings
- No reworking necessary thanks to neat and burrfree machining

Technical Data	DATRON M7 Compact
Coordinate Table	Solid granite table on a steel base, portal set-up with double-sided Y-drive, precision guides
Machining Area (X x Y x Z)	500 x 500 x 240 mm
Portal Height	200 mm
Clamping Area	700 mm x 500 mm (X, Y)
Footprint	1300 mm x 1300 mm x 1950 mm (W x D x H)
Control System	Digital servo drives
Lubrication and Cooling System	Minimal quantity lubrication, electronically adjustable dispensing
Machining Spindle (optional)	600W high-frequency spindle, 7,000 - 60,000 rpm, with pneumatic shaft clamping system
Tool Changer (Option)	5-fold tool changing unit with tool length sensor, 15-fold tool changing unit with chip protection lid and length sensor
Control System	Decentral, digital servo control with PC user interface
Feed Rate and Positioning Feed	up to 16 m/min
Weight	Approx. 800 kg

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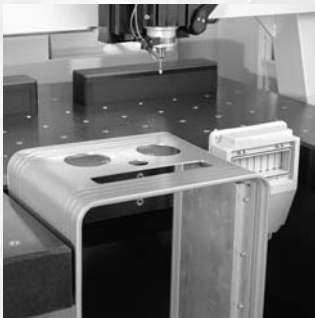
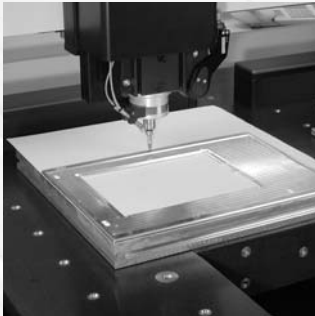
**CNC Machining Systems**

Mini Tools

Dispensing Systems

Positioning Drive Units

Consultation and Training



## DATRON M35

**CNC Machining System with Optimum Cost-Performance Ratio**

**Precise and Economic Milling, Drilling, and Engraving of Aluminium, Deep Drawing, Ureol, Thermoforming, Acrylic, GFRP and CFRP workpieces**

- Working Area 1000 mm x 700 mm x 240 mm
- Fully Enclosed Machining Area
- Working Area and Positioning Feed up to 10 m/min
- Excellent Cost-Performance Ratio

**"The Swiss Army Knife" in CNC Machining!**

The innovative construction of the newly developed CNC machining system M35 and efficient accessories are the basis for the specially high versatility in precise milling and drilling applications.

The CNC machine offers a working area of 1000 x 700 mm and can be configured with a high-frequency spindle with a rotational speed of up to 60,000 rpm.

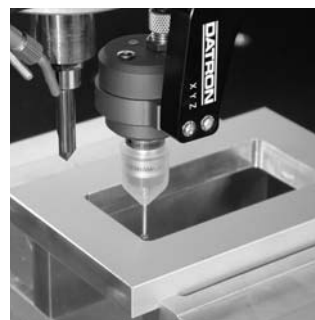
The machining table has been cast with solid concrete polymer. The vertical clamping surface at the front for machining particularly high parts is a special feature of the M35 machine. A continuous table surface is optionally available. The machining system can be upgraded for using the DATRON module clamping techniques.



**Equipment**

The standard equipment of the M35 CNC system consists of:

- a solid concrete polymer coordinate table in a steel protective cover
- quick 3D CNC control system for three to six axes
- Monitor 17" with Standard-PC
- network, CD and floppy disk for data exchange
- hand-held control unit with electronic jog mode
- program-controlled minimal quantities tool lubrication and cooling system
- menu-based CNC programming software winCNC



**Accessories (Option)**

- Vertical clamping surface (M35 -A) or continuous clamping table (M35 -B)
- Tool changer: 10- or 20-tools
- Clamping systems: manual, pneumatic, vacuum
- Electronic Z-correction with XY touch probe
- High-speed tools
- CAD/CAM and 3D engraving software

**Advantages and Areas of Application**

The large machining area and high stability of this machining system are ideal for:

- machining large sheets and plates
- series production of technical aluminium and plastic parts
- efficient series production with module clamping techniques
- cost-effective execution of general CNC machining tasks

Technical Data	DATRON M35
Coordinate Table	Solid concrete polymer on a steel base, portal set-up with double-sided Y-drive, precision guides
Machining Area (X x Y x Z)	1000 x 700 x 240 mm
Portal Height	200 mm
Clamping Area	1170 mm x 1090 mm (X, Y)
Vertical Clamping Area	Range: 250 mm x 600 mm up to 900 mm height
Floor Space	1750 mm x 1450 mm x 1950 mm (W x D x H)
Driving System	Digital servo drives
Lubrication and Cooling System	Minimal quantity lubrication, electronically adjustable dispensing
Machining Spindle (optional)	600W high-frequency spindle, 7,000 - 60,000 rpm, with pneumatic shaft clamping system
Control System	Decentral, digital servo control system with PC user interface
Feed Rate and Positioning Feed	up to 10 m/min
Weight	Approx. 800 kg

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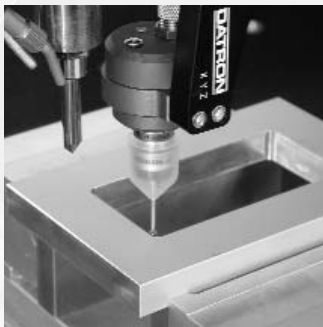
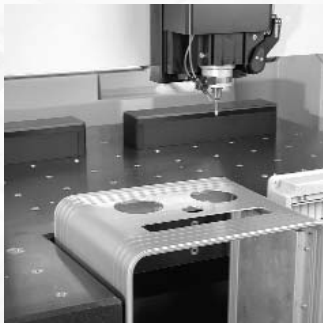
**CNC Machining Systems**

Mini Tools

Dispensing Systems

Positioning Drive Units

Consultation and Training



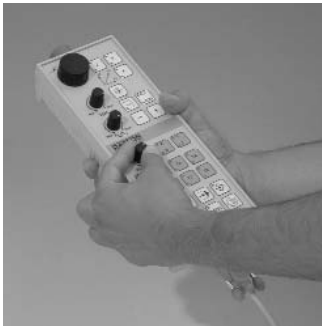
## DATRON M8

### High-Performance Chip Removal with up to 60,000 rpm

- Large Machining Area, Small Floor Space
- Specially designed for the Efficient and Precise Machining of Aluminium and Plastics
- Innovative Machine Construction with Polymer Concrete Table
- Highest Efficiency thanks to Innovative Accessories

**Profitable Production Using the Correct Accessories**

An optimally configured system is the key to a successful application solution. DATRON offer technically-mature accessories. The result are significantly lower secondary processing times, higher machining precision, and thus maximum efficiency.

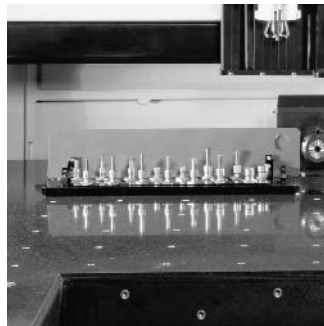
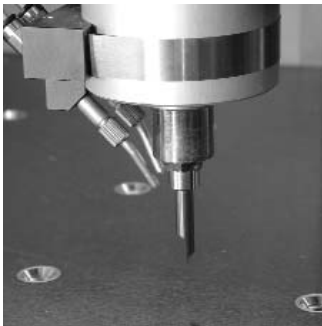


**left: Hand-held Control Unit**

For a better control and an especially easy operation of the machine. Configured with an electronic hand wheel, fast feed and positioning feed control, coolant control and dispensing; function keys.

**right: High-Frequency Spindles**

The precision of the spindle greatly determines the cutting quality. DATRON offer high-frequency spindles up to 60,000 rpm. With a careful selection of the suitable power and rotation parameters we will optimise the machining system for your application. You may choose between various manufactures and types.

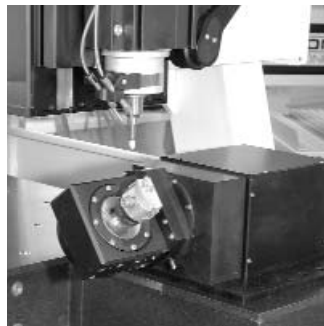
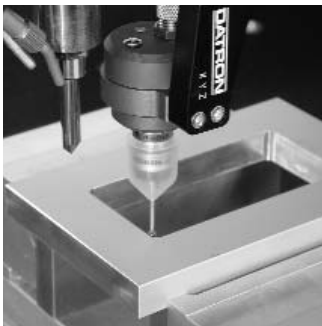


**left: Minimal Quantity Cooling**

The basis for burr-free machining and long tool life is a good cooling and lubrication unit. DATRON offer proven and tested minimum quantity cooling systems. They are fully software-controlled and the tank can be easily accessed.

**right: Automatic Tool Changer**

Up to 30 tools can be used during the machining process. The integrated tool length sensor guarantees reliable referencing.



**left: XYZ Sensor**

Precise measurement of complex 3D workpieces and automatic Z height compensation: With the DATRON XYZ sensor you will save time and money and produce safe quality. All edges and area measurements are comfortably integrated into the control system.

**right: Rotary Axis**

Precision axis for multi-side machining of fine mechanical parts. The combination of rotation and swivel axis offers a specially compact set-up whilst being highly precise at the same time.

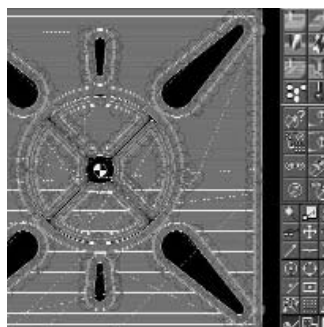
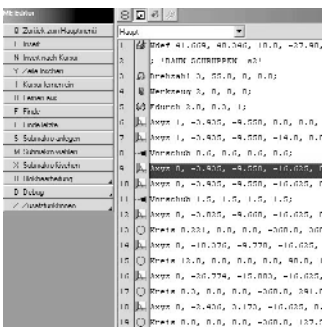


**left: Pneumatic Short-Stroke Clamping with Tee-nut Module Plate**

DATRON have developed these new types of clamping elements for extremely quick and comfortable clamping of parts with a small format. The individual clamping elements can be positioned freely within the Tee-nuts. Clamping and shifting are controlled with an integrated switch. The Tee-nut plate is 250 mm wide and 460 mm long.

**right: Modular Clamping Elements**

All clamping modules, such as the short-stroke clamping units or vacuum plates are fitted into special fixtures in the machining table. They are quickly and precisely adjusted and fastened with a vacuum suction. The clamping modules can therefore be exchanged very quickly.



**left: CNC Macro Programming**

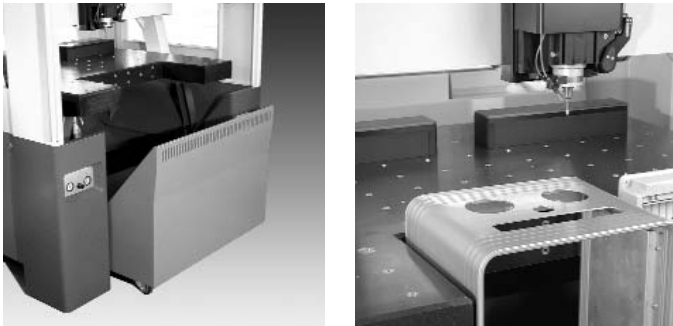
The integrated control software ensures a fast machine set-up and CNC programming. The Windows-based PC program offers clear and user-friendly menu-based programming. A graphical simulation for control purposes is integrated.

**right: CAD/CAM Interfaces**

The CAD/CAM programming can optionally be carried out directly on the machine. Also external CAM data can be imported without problems via interfaces.

## Versatility and Quality

The machining system M8 was specially designed for CNC milling, drilling, and engraving applications of Aluminium and Plastics. With a precision high-frequency spindle with up to 60,000 rpm and small tools very short cycle times are achieved.



### left: Chip Collector Wagon

The compact protective cover reduces the necessary floor space to a minimum. The doors open wide and thus enable an easy access of the machining area. The produced chips can be easily removed from the coasting chip collector wagon.

### right: Machining Table

The concrete polymer machining table guarantees an exceptionally high vibration damping and therefore high cutting quality. A special advantage is the additional vertical clamping area. Parts up to 900 mm high can be clamped and machined frontally.

## Applications Machining System M8

Milling, Drilling, and Engraving of:

- Aluminium Extrusions
- Aluminium and Plastic Panels
- Front Panels and Housings
- Forms, Prototypes

## Characteristics Machining System M8

- Large Machining Area  
1020 mm x 700 mm x 240 mm  
1020 mm x 1520 mm x 240 mm (M8XL)
- Solid Concrete Polymer Table
- Smart Chip Removal thanks to large Chip Collector Wagon
- Compact Protective Cover with large Door
- Vertical Clamping Area for Specially High Parts (Option)
- Feed Rate in Material up to 20 m/min
- Minimum Quantity Cooling System
- Automatic Tool Changer for up to 30 Tools
- PC Control System with CAD/CAM Interfaces
- High Machine Availability thanks to Proven and Tested Quality and Fast Customer Support



## Forte of the Machining System M8

- High-Speed Machining of Aluminium and Plastics
- Complex 3D Milling with Small Tools
- Precises Engraving on every surface; Nesting of Small Parts

## CNC Machining System M8

Benefit with DATRON's CNC machining system M8 from our many years of experience in the specially economic and top-quality machining of Aluminium and Plastics!

A large machining area and high precision - the M8 system completes the range of machining systems offered by DATRON when higher requirements in milling efficiency and precision are on the agenda. With the know-how of more than 1000 installations world-wide, DATRON will offer you the security and quality of technically-mature production solutions for your machining tasks.



Technical Data	DATRON M8	DATRON M8 XL-1500
Coordinate Table	Solid concrete polymer on a steel base, portal set-up with double-sided Y-drive, precision guides	
Machining Area (X x Y x Z)	<b>1020 mm x 700 mm x 240 mm</b>	<b>1020 mm x 1520 mm x 240 mm</b>
Portal Height	200 mm	200 mm
Clamping Area (X,Y)	<b>1170 mm x 780 mm</b>	<b>1170 x 1700 mm</b>
Vertical Clamping Area	Range: 250 mm x 600 mm; up to 900 mm high	
Machine Dimensions (B x T x H)	<b>1700 mm x 1450 mm x 1950 mm</b> incl. Monitor: 2300 mm (Width)	<b>1700 mm x 2300 mm x 2000 mm</b> incl. Monitor: 2300 (Width)
Driving System	Digital servo drives; precision ball screws for each axis	
Machining Spindle (Option)	E.g. 2 kW high-frequency spindle, 7,000 - 60,000 U/min, Power Range from 0.6 kW - 4.5 kW available	
Lubrication and Cooling System	Minimal quantity lubrication, electronically adjustable dispensing	
Control System	Decentral, digital high-speed servo control with PC user interface	
Feed Rate and Positioning Feed	<b>X: 20 m/min</b> <b>Y: 20 m/min</b> <b>Z: 8 m/min</b>	<b>X: 20 m/min</b> <b>Y: 16 m/min</b> <b>Z: 8 m/min</b>
CAD Interfaces	For all standard CAD/CAM systems: DIN 66025 (G-Code), HPGL, Excellon, CL-Print (each optional)	
Protective Cover	<b>with front swing door</b>	<b>alternatively with side door or front swing door</b>
Weight	<b>approx. 0.8 t</b>	<b>approx. 1.6 t</b>

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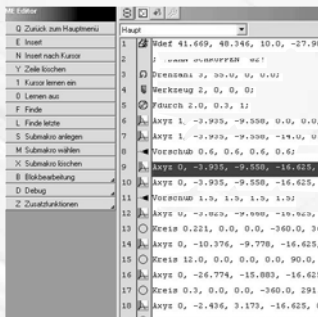
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## DATRON MBXL-1600

CNC Machining System for Large-Format Sheets and Extrusions

- CNC-Machining of Nonferrous Metal and Plastics
- Machining Area 1020 mm x 1520 mm x 240 mm
- High Accuracy through Steel/Polymer Construction

**M8XL-1600 CNC Large-Format Machining System**

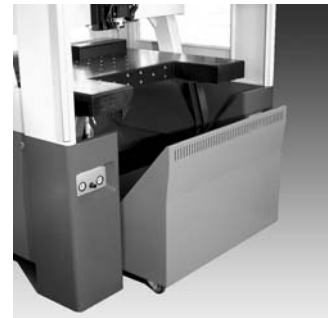
The machining system M8XL-1600 is specially designed for the precise machining of large-format workpieces. The useable machining area is 1020 mm x 1520 mm with a floor space of 1700 mm x 2300 x 2000 mm. The solid vibration-damped construction with precision linear guides is the basis for high production quality, even whilst machining at high speed. The large swing doors at the front and rear side of the machine enable an easy loading of the machine.



**Equipment**

The standard equipment of the M8XL-1600 CNC system consists of:

- a solid cast polymer coordinate table in a steel protective cover
- quick 3D CNC control system for three to six axes
- LCD operating terminal with standard PC
- network, CD, and floppy disk for data exchange
- hand-held control unit with electronic jog mode
- program-controlled minimal quantities tool lubrication and cooling system
- menu-driven CNC programming software winCNC



**Accessories (optional)**

- 600 W, 1.6 kW and 2 kW with direct shaft clamping
- 1.8 kW or 4.5 kW high-frequency spindle with HSK tool holding fixtures
- Span-protected tool changer: up to 30 tools, depending on spindle type
- Clamping systems: manual, pneumatic, vacuum
- Electronic Z-correction with XY touch probe
- High-speed tools
- CAD/CAM and 3D engraving software

**Advantages and Areas of Application**

The large machining area and at the same time high stability and speed offer:

- an exceptionally high production speed when small tools are used for cutting
- fully enclosed protective cover with large doors
- solid cast polymer machining table
- high-frequency spindle up to 60,000 rpm
- vacuum and modular clamping systems optionally available

Technical Data	DATRON M8XL-1600
Coordinate Table	Solid cast polymer on a steel base, portal set-up with double-sided Y-drive, precision guides
Machining Area (X xY x Z)	1020 x 1520 x 240 mm
Portal Height	200 mm
Clamping Area (X,Y)	1170 x 1700 mm
Vertical Clamping Area (Table with cut out)	Range: 250 mm x 600 mm; up to 900 mm high
Machine Dimensions (B x T x H)	1700 mm x 2300 mm x 2000 mm incl. Monitor: 2300 (Width)
Driving System	Digital servo drives; precision ball screw
Lubrication and Cooling System	Minimal quantity lubrication, electronically adjustable dispensing
Machining Spindle (optional)	E.g. 2 kW high-frequency spindle, 7,000 - 60,000 rpm, other types available
Control System	Decentral, digital high-speed servo control with PC user interface
Feed Rate and Positioning Feed	X: 20 m/min Y: 16 m/min Z: 8 m/min
Weight	Approx. 1.6 t

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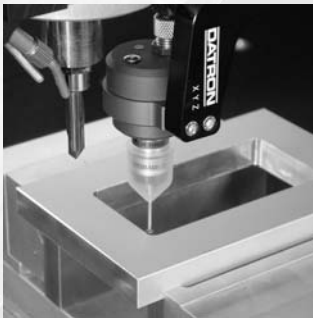
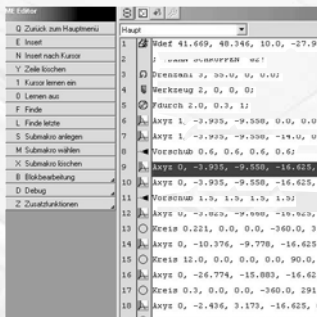
CNC Machining Systems

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## DATRON M8 XL-2500

### CNC Machining System for Large-Format Sheets and Extrusions

- Machining Area 1020 mm x 2500 mm x 240 mm
- Feed Rate and Positioning Speed up to 20 m/min
- High Accuracy through Steel/Polymer Construction
- High-Performance Vacuum Tables and Extrusion Clamping Systems

## DATRON M8 XL-2500

### M8 XL-2500 CNC Large-Format Machining System

The machining system M8 XL-2500 is specially designed for the precise machining of large-format workpieces or aluminium extrusions. The useable machining area is 1020 mm x 2500 mm with a floor space of 1750 mm x 3300 mm x 1950 mm. The solid vibration-damped construction with precision linear guides is the basis for high production quality, even whilst machining at high speed. A variety of protective covers is available on request.



### Equipment

The standard equipment of the M8 XL-2500 CNC system consists of:

- a solid concrete polymer coordinate table
- 3D CNC control system for three to six axes
- LCD operating terminal with standard PC
- network, CD, and floppy disk for data exchange
- hand-held control unit with electronic jog mode
- program-controlled minimal quantities lubrication and cooling system
- menu-driven CNC programming software winCNC



### Accessories (optional)

- High-frequency spindles: 1.6 kW and 2 kW with direct shaft clamping
- 1.8 kW or 4.5 kW high-frequency spindle with HSK tool fitting device
- Tool changer: 10 to 20 tools
- Clamping systems: manual, pneumatic, vacuum
- Electronic Z-compensation with XY touch probe
- High-speed tools
- CAD/CAM and 3D engraving software

### Advantages and Areas of Application

The large machining area and at the same time high stability and speed offer:

- an exceptionally high production speed when small tools are used for cutting
- solid concrete polymer machining table
- high-frequency spindle up to 60,000 rpm
- vacuum and modular clamping systems optionally available

Technical Data	DATRON M8 XL-2500
Coordinate Table	Solid concrete polymer on a steel base, portal set-up with double-sided Y-drive, precision guides
Machining Area (X x Y x Z)	1020 mm x 2500 mm x 240 mm
Portal Height	200 mm
Driving System	Digital servo drives; precision ball screw
Lubrication and Cooling System	Minimal quantity lubrication, electronically adjustable dispensing
Machining Spindle (optional)	E.g. 2 kW high-frequency spindle, 7,000 - 60,000 rpm, other types available
Feed Rate and Positioning Feed	X: 20 m/min Y: 16 m/min Z: 8 m/min
Weight	Approx. 2 t

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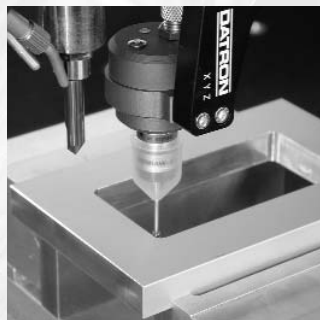
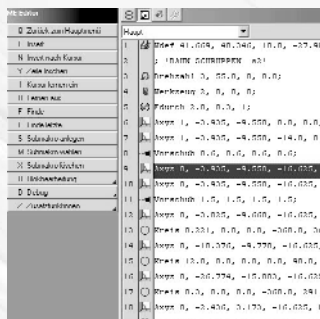
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## DATRON M9

### Compact CNC Machining System with High-Speed Spindle

- Ideal for Small Electrodes and Precision Mechanics
- Working Area 400 mm x 400 mm x 200 mm
- Working Area and Positioning Feed up to 12 m/min
- Vibration-Damped Construction with Quick Control System

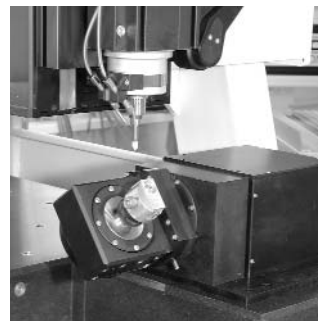
**M9 Machining System**

Precision and high machining speed with small tools - the CAT3D-M9 coordinate table, with its excellent technical data and low price, rounds off the range of DATRON machining systems. The solid cast iron construction with fixed portal design ensures low vibration tendency and high stability. The servo driving system with precision guides guarantees high cutting quality and dynamics.

The system can be adapted according to your production requirements with the help of efficient and versatile accessories. As all DATRON machining systems are based on practical experience, they offer high reliability, outstanding productivity and consequently high economic efficiency for your production process.



Technical Data	DATRON-M9
Coordinate Table	Solid cast iron bed mounted on a steel base, precision guides
Machining Area (X x Y x Z)	400 mm x 400 mm x 200 mm
Z-Axis	200 mm travel
Portal Height	300 mm
Clamping Area	485 mm x 500 mm (X, Y)
Dust Protection (Option)	Central lubrication; sealing of the threaded spindles; positive air-flow air purge sealing
Floor Space	1350 mm x 1450 mm x 1950 mm (W x D x H)
Driving System	Digital servo drives; precision ball screw spindles
Lubrication and Cooling System	Electronically adjustable dispensing, program-controlled, directionally dependent working
Control System	Decentral, digital high-speed servo control system with PC user interface
Feed Rate	Up to 12 m/min
Positioning Feed	Up to 12 m/min
Programming	Menu-based CNC programming with PC with graphic simulation, CAD interfaces, engraving and CAD/CAM programs (optional)
CAD Interfaces	For all popular CAD/CAM systems; DIN 66025 (G-code), HPGL, Excellon, CL-Print (each optional)
Weight	Approx. 720 kg
Optional Accessories	Electronic Z-correction, high-frequency spindle, automatic tool changer, clamping systems, CAD/CAM software, graphite sealing, graphite extraction system



**Applications of the M9 Machining System**

- Precision mechanics/optics
- Electronics industry
- Watch industry
- Mould and model construction
- Medical engineering

**Special Features of the M9 Machining System**

You can achieve extremely short machine operation cycles and, at the same time, excellent machining quality with a precision high-frequency spindle with up to 60,000 rpm, especially if you use small tools. It is also possible to machine abrasive materials such as graphite and glass and carbon fibre reinforced plastics without any problems with the optionally available dust extraction system and extra protection for the guides.

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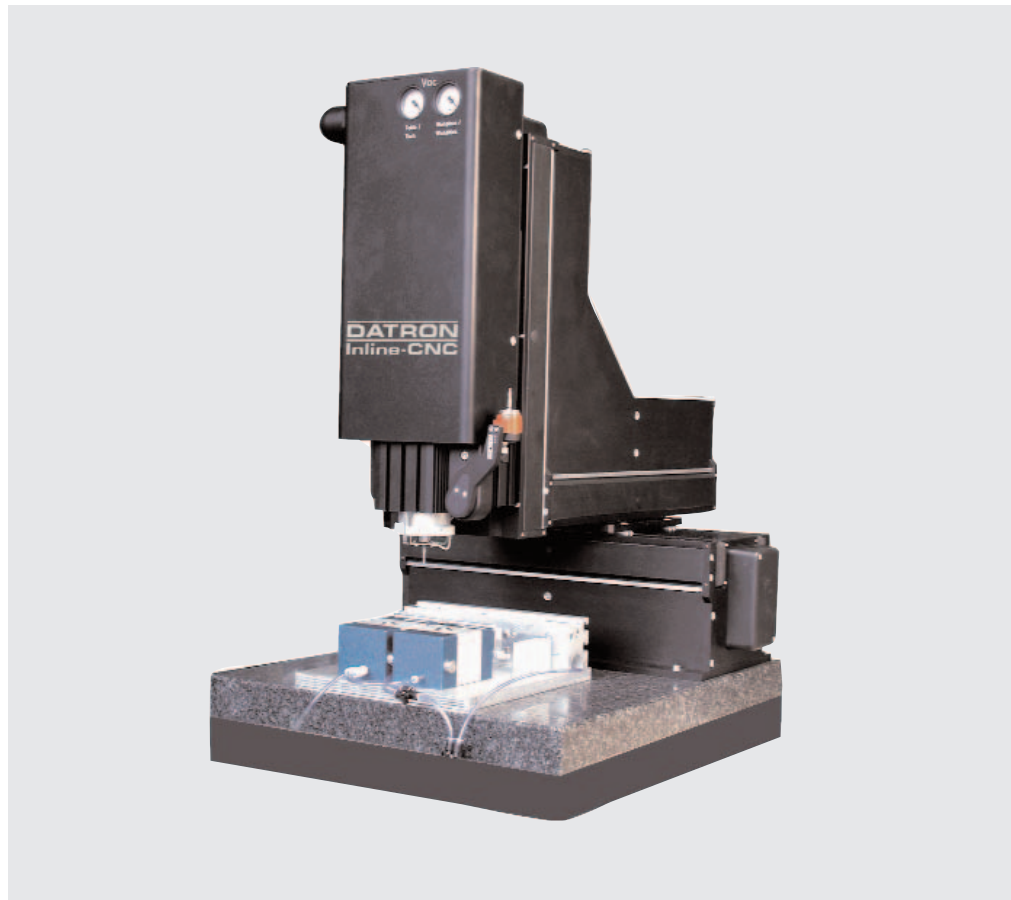
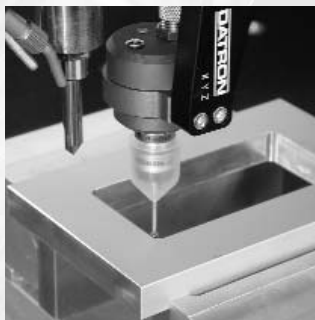
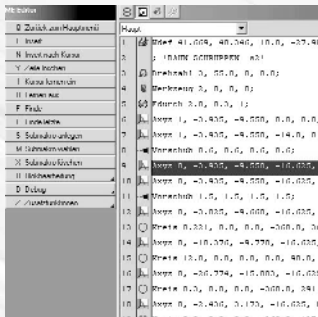
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## DATRON Inline-CNC

### Modular Cantilever CNC Machining System

- Working Area 240 mm x 150 mm x 240 mm (X, Y, Z)
- Modular Design with the Possibility of Interlinking Several CNC Machining Units
- High Positioning Speeds and Feed up to 16 m/min
- Working Lengths (X Axis) of 240 mm to 2750 mm are possible

**CNC Machining System for Production Lines**

The main strength of the new DATRON In-Line CNC machine lies in its versatility of application: This new CNC machine can be used for CNC precision machining of small parts as well as high-speed milling of aluminium profiles. Due to its modular structure with fixed Z and Y traverse axes and a customizable X axis (machining length), this machine offers new solutions for economical mass production.

As it is designed as cantilever, it can be integrated in production lines very easily. For complex machining tasks, several DATRON In-Line milling and drilling units can be interlinked.



Technical Data	DATRON InLine-CNC
Cantilever coordinate table	Precision guides and ball screws
Machining Area (X x Y x Z)	240 mm x 150 mm x 240 mm
Z Axis	240 mm travel
Portal Height	Freely definable
Clamping Area	500 mm x 350 mm (X, Y) (table machine)
Floor Space	Depending on the axis configuration
Driving System	Digital servo drives; precision ball screw spindles
Lubrication and Cooling System	Electronically adjustable dispensing, program-controlled, directionally dependent working
Control System	Windows-based digital high-speed servo control with PC user interface
Feed Rate	Up to 10 m/min
Positioning Feed	Up to 16 m/min
Programming	Menu-based CNC programming with PC with graphic simulation, CAD interfaces, engraving and CAD/CAM programs (optional)
CAD Interfaces	For all popular CAD/CAM systems; DIN 66025 (G-code), HPGL, Excellon, CL-Print (each optional)
Weight	Approx. 120 kg (axis system with granite base plate, table machine)
Optional Accessories	Electronic Z correction, high-frequency spindle, automatic tool changer, clamping systems, CAD/CAM software



**Applications of the Machining System**

- Aluminium extrusions machining
- 2D/3D engraving
- Precision mechanics
- Electronics industry
- Medical engineering

**Applications of the In-Line CNC Machining System**

- Full InLine capability
- Can be equipped with several heads
- Thanks to the adaptable X axis, the working area can be designed according to the customer's requirements
- High availability, low wear-related costs
- High feed rates up to 16 m/min

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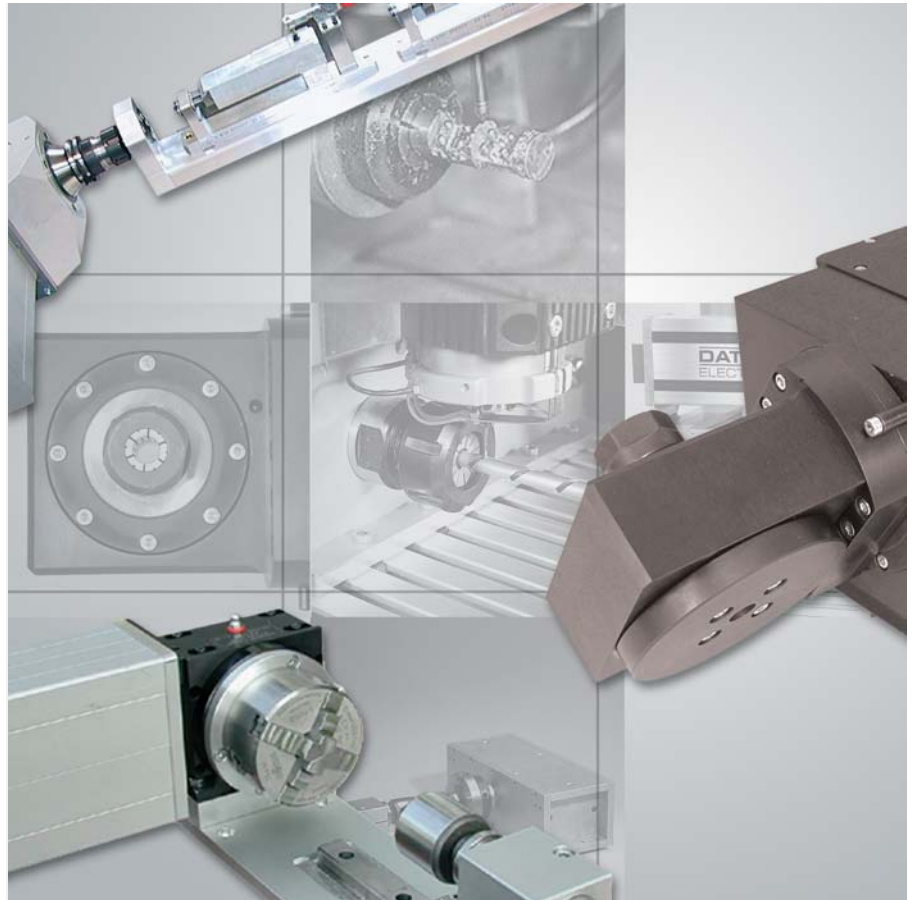
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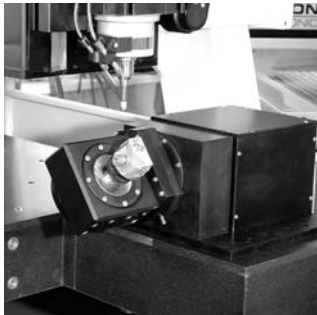


## DATRON **Rotary Axes**

### **Multi-Rotary axes with intelligent servo control system**

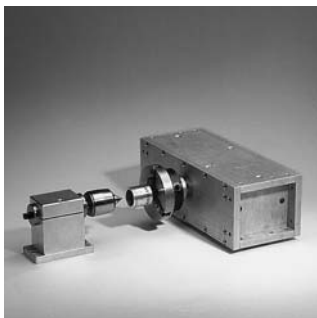
- For multi-side machining in precision mechanics
- Robust and compact construction
- Several basic versions guarantee optimum solution for your application requirements
- Extremely simple operation with the DATRON CNC control system

With high rotating spindles up to 60,000 rpm DATRON-machining systems are optimised for CNC machining with smaller tools. With DATRON rotary axes, you can carry out multi-side machining of precise mechanical parts. Typical applications are small electrodes, circular engraving as well as decorative items. All DATRON rotary axes are delivered with integrated servo positioning unit and auxiliary software. They can also be installed later without any problems.



### Multi-Rotary axis

This newly developed axis offers a particularly high degree of accuracy during the machining of precise mechanical parts. It has been designed for M4 and M8 machines. The swivelling axis can be turned up to 300 degrees, the rotating axis is without any limit stop. The axial and radial running is within 0,01 mm. The positioning and repetitive accuracy values are in the lower angular second range. The unit has been constructed in the safety class IP54, weighs approx. 8.4 kg. Its dimensions are 202 x 230 x 130 (L x W x H in mm) and height of centres is 75 mm.



### Horizontal axis

This compact rotary axis can be used for all applications which require rotating on the horizontal machine table. The mandrel has been designed for collet chucks of the type EX32 with an inside diameter of 3 to 20 mm.

With a resolution of 64000 steps/revolution, this rotary axis is absolutely suitable for machining cylindrical bodies, for circular engraving, and for rotational milling or general multi-side machining.

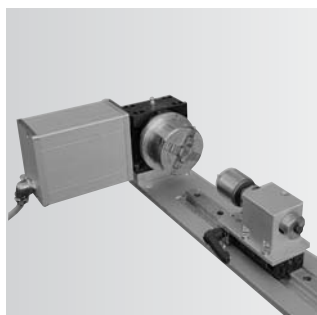


### Vertical axis

For applications in which work pieces have to be turned in front of the vertical clamping area of Datron machines M3 or M8.

This axis, whose robust gear mechanism runs in an oil bath, is very precise and extremely free from backlash. The axis has a resolution of 360.000 steps/revolution and is delivered with a SK40 mandrel. Its dimensions are 148 mm x 352 mm x 185 mm (W x H x D). The picture on the left shows the vertical axis in combination with the horizontal axis. This allows a rotating and swivel operation.

**Customer-specific rotary axes**  
DATRON offer customer-specific solutions based on rotary axes for multi-side machining.



### Compact rotary axis

This compact axis can be easily adjusted according to customer-specific applications. For instance, in combination with a tailstock for machining long rotationally symmetrical parts.

The radial run-out accuracy is 10µ. The mechanical positioning accuracy is 0,05 degrees.

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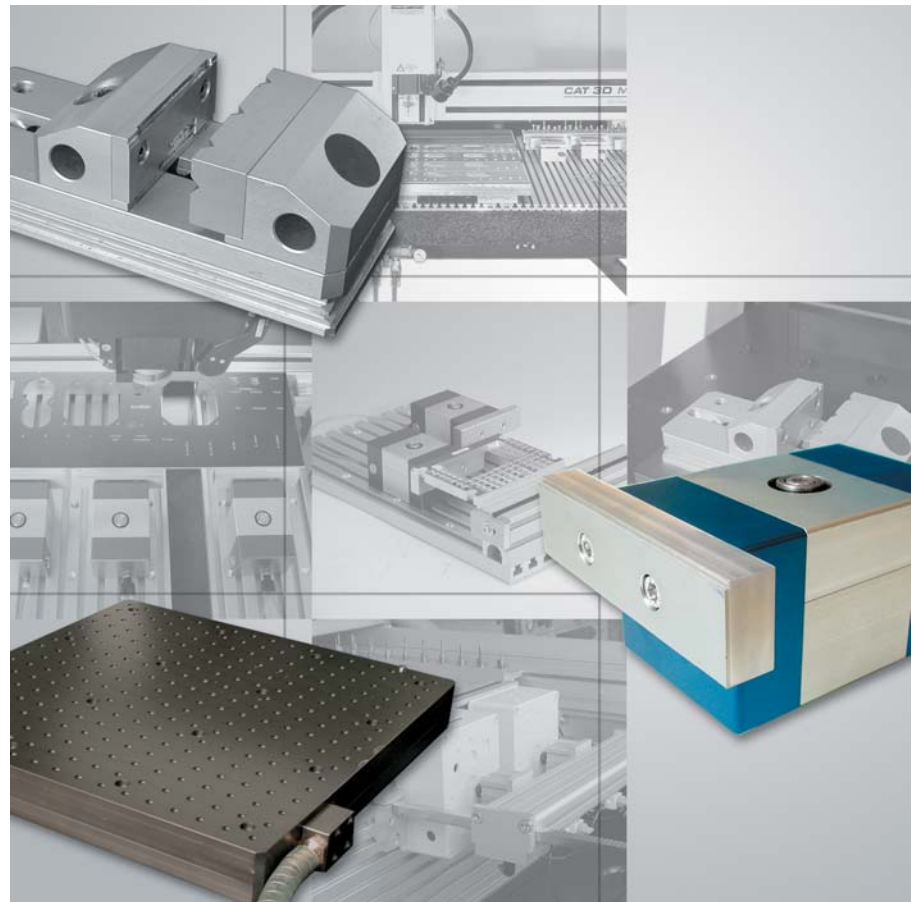
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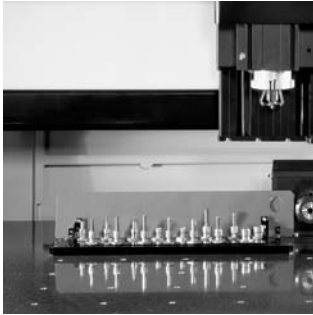


## DATRON **Clamping Modules**



### Cost-effective manufacturing with quick clamping in a matter of seconds

Set-up times can be reduced drastically with the new module clamping technique of DATRON. Module plates which locate via conical centring sleeves are directly locked in position by vacuum on the table (M8) or on a base plate. The advantage lies in an extremely quick change of clamping modules and the high repetitive accuracy of the clamping position of a few hundredths of a millimetre. Naturally the modules can also be screwed up in the conventional manner.

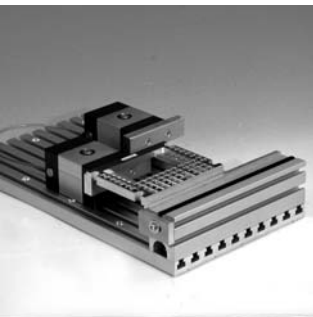


#### Left: Machine table "M8" with conical centring bushes

The module clamping systems were especially developed for the new DATRON machining system M8. As an option, the standard thread bushes can also be delivered in a conical shape. Due to the bushes, the sealed area of the clamping modules is evacuated through the bushes and therefore pressed on the table with a force of approx. 7N per cm<sup>2</sup>. This generates holding forces of more than 2500 N even for a small clamping module of, for instance, 200 x 200 mm.

#### Right: Basic modules for module clamping plates

Basic modules are available for retrofitting existing CNC machines. They are delivered together with a fastening set, a small vacuum pump and a sensor for monitoring the vacuum.

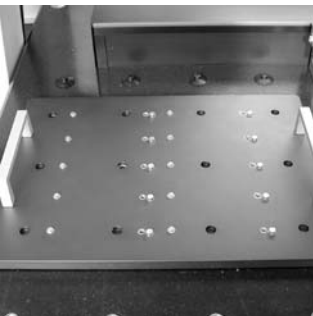


#### Left: Pneumatic short stroke clamping with Tee-nut module plate

DATRON have developed these new types of clamping elements for an extremely quick and comfortable clamping of parts with a small format. The individual clamping elements can be positioned freely within the Tee-nuts. Clamping and shifting are controlled with an integrated switch. The Tee-nut plate is 250 mm wide and 460 mm long.

#### Right: Pneumatic short stroke clamping

The new pneumatic-hydraulic short stroke clamping elements have an adjustable holding force of 0 - 800N (at 6 bar compressed air). They can be swivelled by 360 degrees. Due to the compact design with dimensions of 105 x 60 x 70 mm (L x H x W), several elements can be used even in a small area.

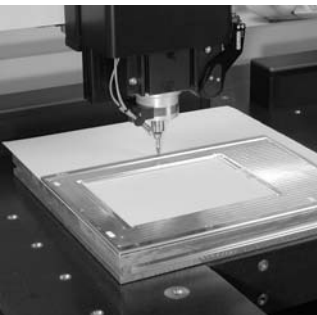
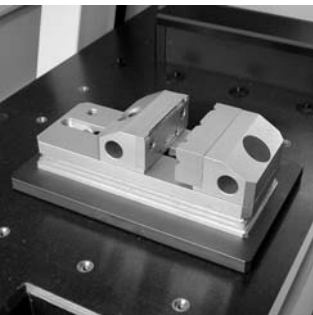


#### Left: Module clamping base plates

The module clamping plates are available in the sizes 180 x 280 mm and 280 x 380 mm as base plates for taking up customized clamping devices. The conical centring sleeves and the sealing for the vacuum suction unit are installed on the lower side of these precisely manufactured base plates.

#### Right: Customized clamping solutions

It is very easy to construct a pallet changing system with the base plates. The example here shows the production of an Aluminium work piece. While one pallet is being machined in the machine, the next one can be prepared.



#### Left: Machine vice on the module clamping plate

As the machine vice is fastened onto the module clamping plate, it can be fixed on the machine table and positioned precisely within seconds.

#### Right: Modular sandwich vacuum plates

One of the remarkable features of DATRON sandwich vacuum clamping plates is their particularly high retention force. An intermediate layer made of special cardboard ensures a reliable vacuum distribution. This intermediate layer also serves as the sacrificial layer, i.e. you can mill into it without any problems. The presently available size of this intermediate layer is 350 x 350 mm.

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