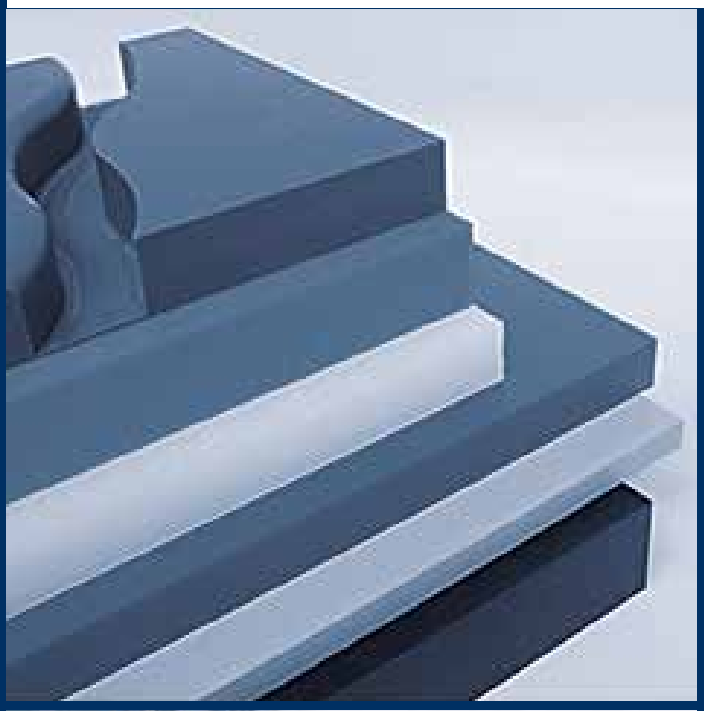
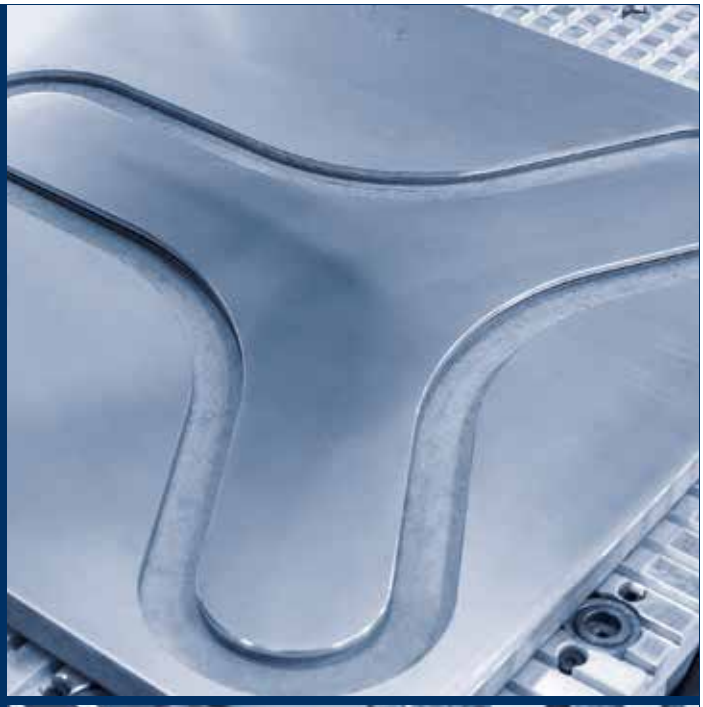
ADVANCED MATERIALS

cms evotech range

3/5-axis CNC machining centers
(Z clearance up to 500 mm)





Cms
advanced materials technology

CMS is part of SCM Group, a technological world leader in processing a wide range of materials: wood, plastic, glass, stone, metal and composites. The Group companies operating throughout the world are reliable partners of leading manufacturing industries in various market sectors, including the furniture, construction, automotive, aerospace, ship-building, and plastic processing industries. SCM Group coordinates, supports and develops a system of industrial excellence in 3 large highly specialized production centers employing more than 4,000 workers and operating in all 5 continents. SCM Group can offer the most advanced expertise worldwide in the design and construction of machinery and components for industrial processing.

CMS SpA manufactures machinery and systems for processing composite materials, carbon fiber, aluminum, light alloys, plastic, glass, stone, and metals. It was established in 1969 by Pietro Aceti, with the aim of offering customized and state-of-the-art solutions based on an in-depth understanding of customers' production needs. Significant technological innovations originating from substantial investments in research and development and take-overs of premium companies have led to constant growth in the various sectors.

Cms
advanced materials technology

CMS Advanced Materials Technology is a leader in the field of numerically controlled machining centers for the working of advanced materials: composites, carbon fibre, aluminum, light alloys and metal. Substantial investiments in research and development have allowed the brand to always be on the forefront of cutting-edge design, with machines that ensure best-in-class performance in terms of accuracy, speed of execution, and reliability; meeting the needs of customers operating in the most demanding divisions. Since the early 2000's**, CMS Advanced Materials Technology** has established itself as a technology partner in areas of excellence such as aerospace, aviation, automotive, race boating, Formula 1, and the most advanced railway industry.

scm group | industrial machinery and components

Cms | your technology partner

Adaptable.
Global.
Innovative.
Lean.
Efficient solutions.

The **AGILE** way for sheets cutting.

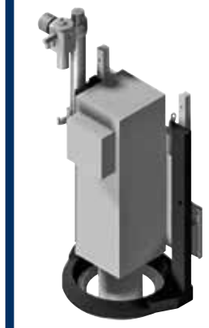
cms evotech range

a company of scm group

EVOTECH 250
TECHNOLOGICAL BENEFITS

LEARN MORE

Syncron electronic copier Vertical machining at constant depth with the Syncron device, which copies the workpiece surface through synchronized Z-axis motion.



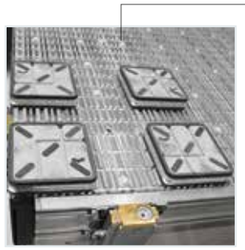
Coaxial mechanical presser, indispensable for clamping small workpieces and machining engineering parts from plastic sheets.

Excellent cleanliness of the machine and its surroundings thanks to the dual coaxial suction hood, which can extract chips and dust under all working conditions.

KEY BUYER BENEFITS

+ 3- and 5-axis machining centers with mobile gantry structures specifically for machining **plastics and advanced materials**, featuring a **rigid, stable structure**.
+ Spindles of up to 15 kW and 24,000 rpm ensure, **exceptional removal capacity** and unique levels of precision and finish under all conditions
+ The aluminum worktable offers **perfect flatness**, ensures **clamping precision** , **advanced nesting** machining and the most **demanding machining of engineering parts**
+ A gantry structure driven by dual motors with **high dynamics**. **Dedicated solution for machining plastics and advanced materials**

Side magazine with up to 12 positions.



The most flexible solution for any plastic part clamping requirements. Suitable for any workpiece reference and clamping needs.

32-position chain magazine anchored to the moving gantry, developed for handling large and heavy tools.

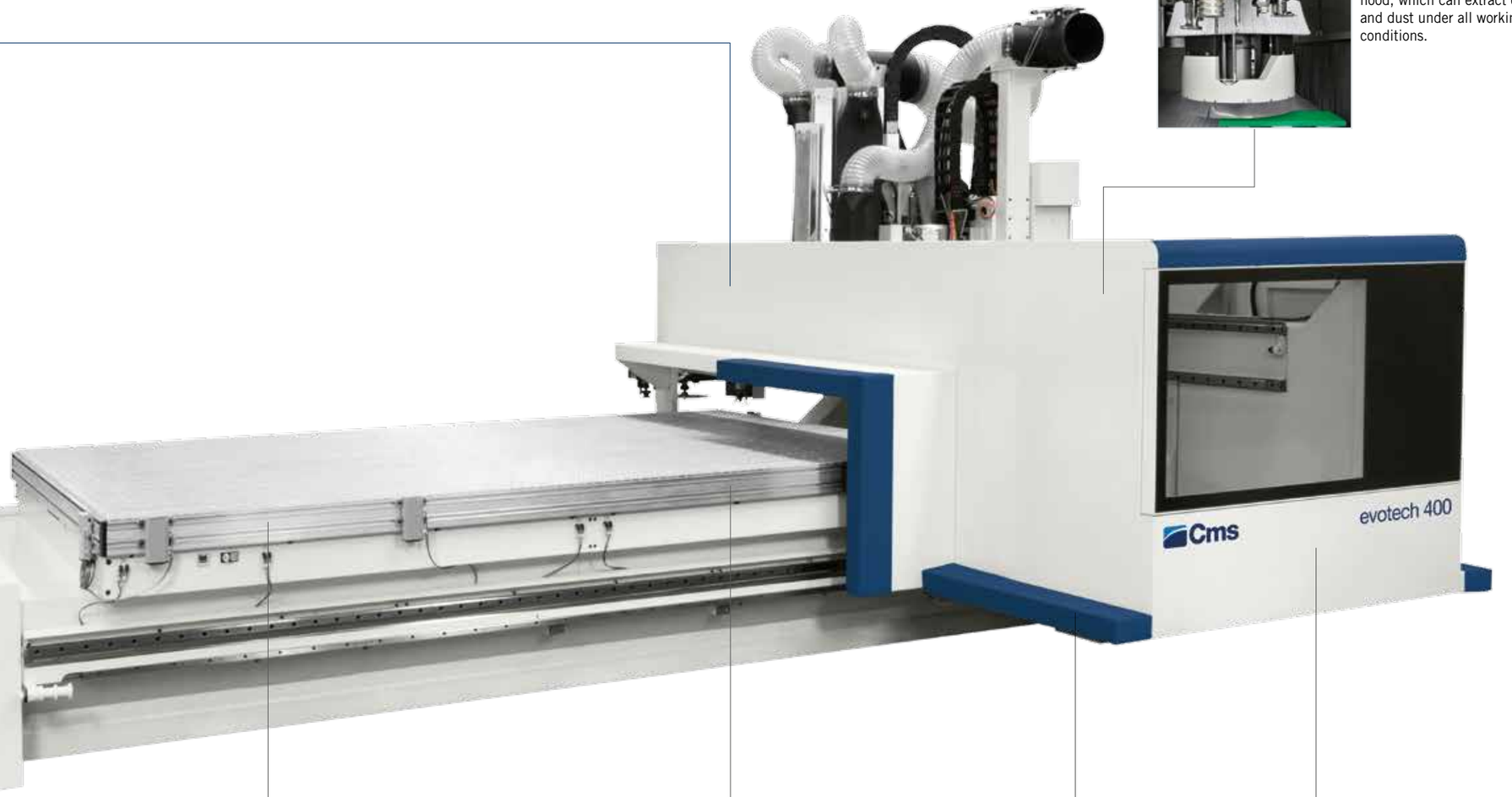
Maximum operator safety with compact bumper guards.

Complete absence of vibration even at high speeds with the gantry structure driven by dual motors. Dedicated solution for machining plastics and advanced materials.

EVOTECH 400
TECHNOLOGICAL BENEFITS

The MACH 5 device performs a tool change in just five seconds, drastically reducing downtime time.

Excellent cleanliness of the machine and its surroundings thanks to the dual coaxial suction hood, which can extract chips and dust under all working conditions.



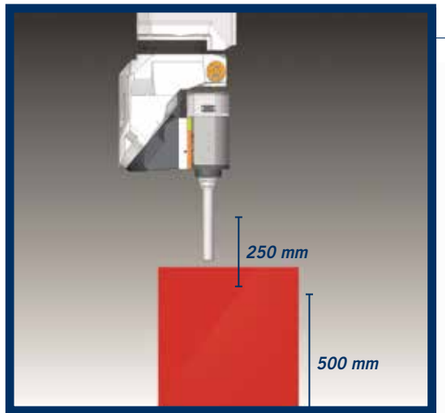
Accuracy of the 5 axes is guaranteed by the RTCP (Rotation Tool Center Point) setting device, which automatically resets the operating unit parameters via a self-calibration system. An indispensable solution for getting the most out of 5-axis machining, especially for engineering parts and components made of advanced materials.

Multifunction worktable suitable for any workpiece reference and clamping needs.

Maximum safety for the operator thanks to compact bumper guards.

Complete absence of vibration even at high speeds with the gantry structure driven by dual motors. Dedicated solution for machining plastics and advanced materials.

EVOTECH 500
TECHNOLOGICAL BENEFITS



The high vertical axis travel can machine workpieces up to 500 mm in height with large tools.

Excellent cleanliness of the machine and its surroundings thanks to the dual coaxial suction hood, which can extract chips and dust under all working conditions.

PRISMA operating unit with **5-axis electrospindle.**

Circular 12-position magazine located on the operating unit.

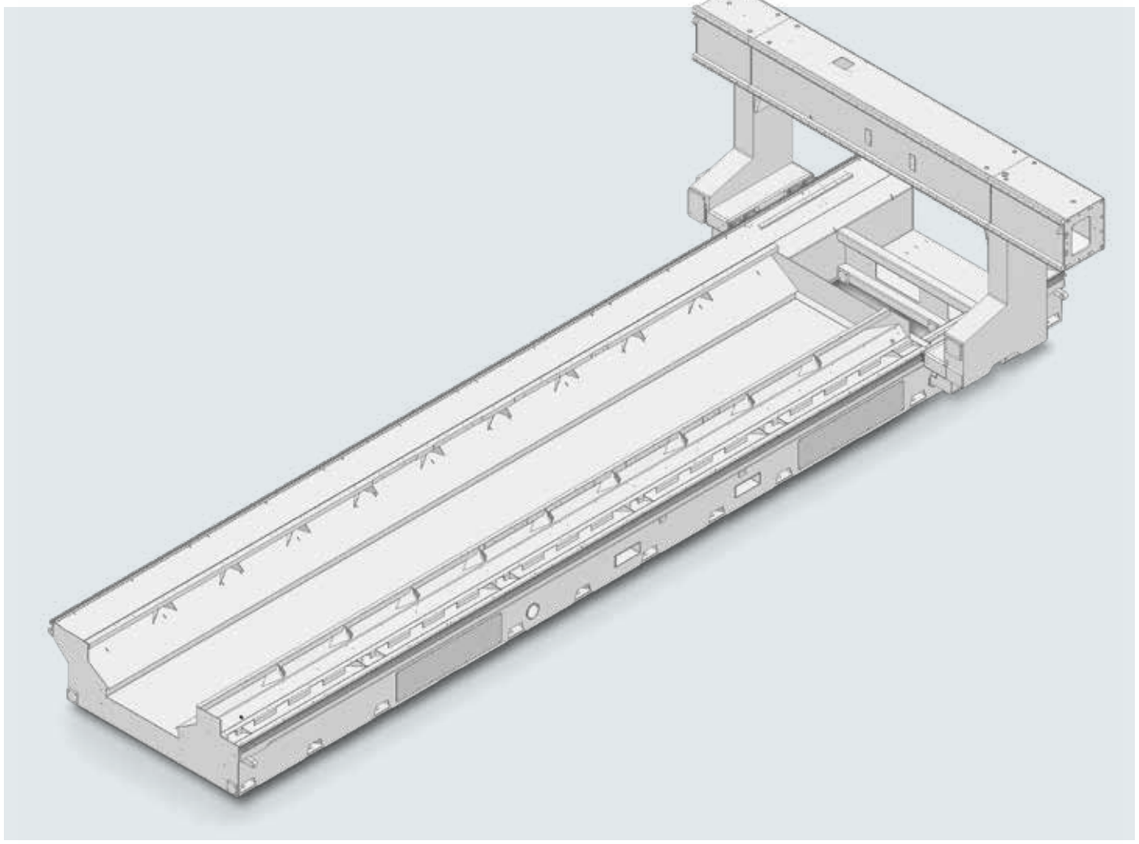
The most flexible solution for any plastic part clamping requirements.
Suitable for any part reference and clamping needs.

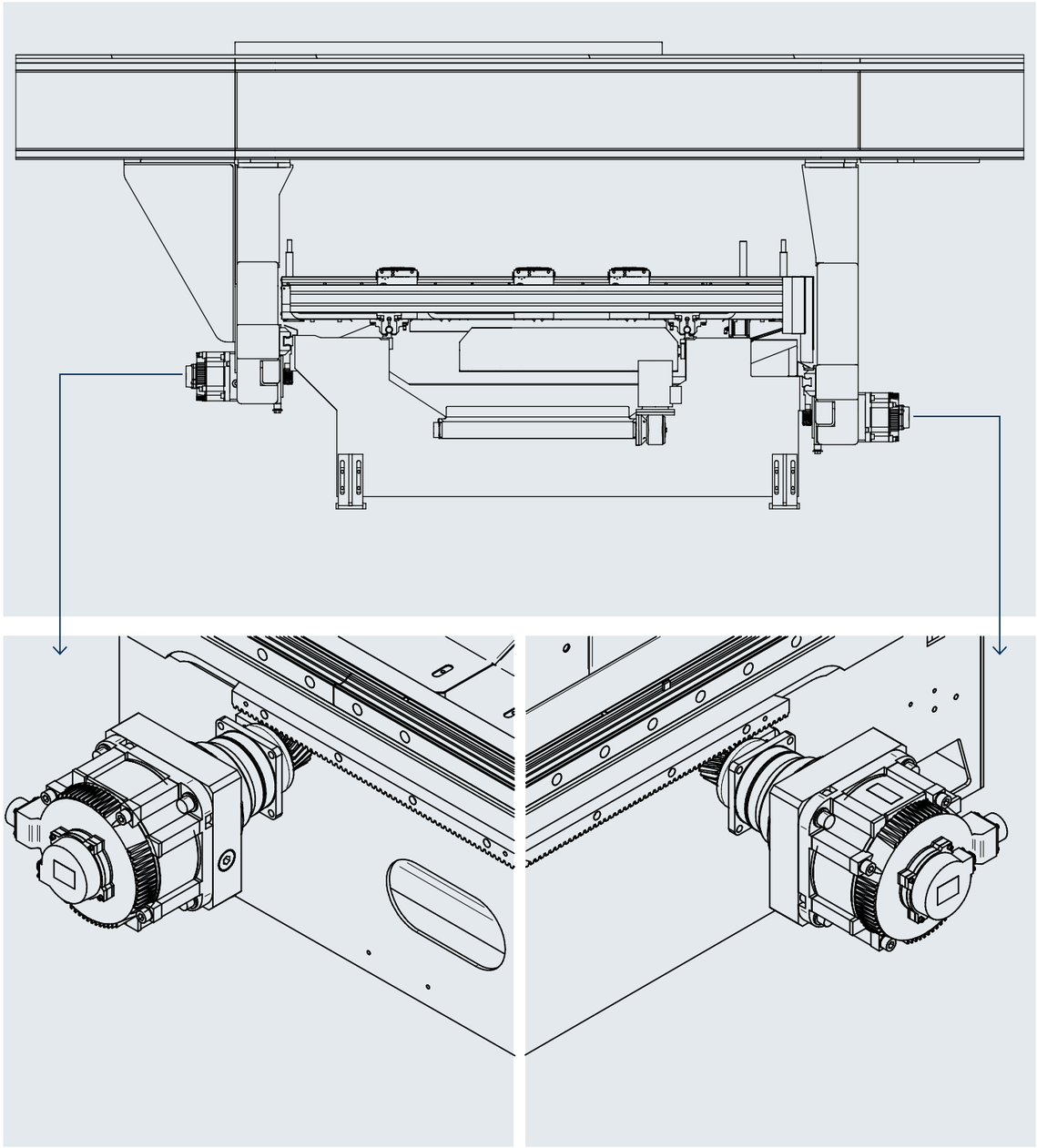
Maximum safety for the operator thanks to compact bumper guards.

Complete absence of vibration even at high speeds with the gantry structure driven by dual motors. Dedicated solution for machining plastics and advanced materials.

ARCHITECTURE
ADVANCED ENGINEERED STRUCTURE

MOVING GANTRY STRUCTURE
The evotech range of machines is designed with a robust and compact mobile gantry structure that ensures the highest quality finish, efficiency and productivity standards.



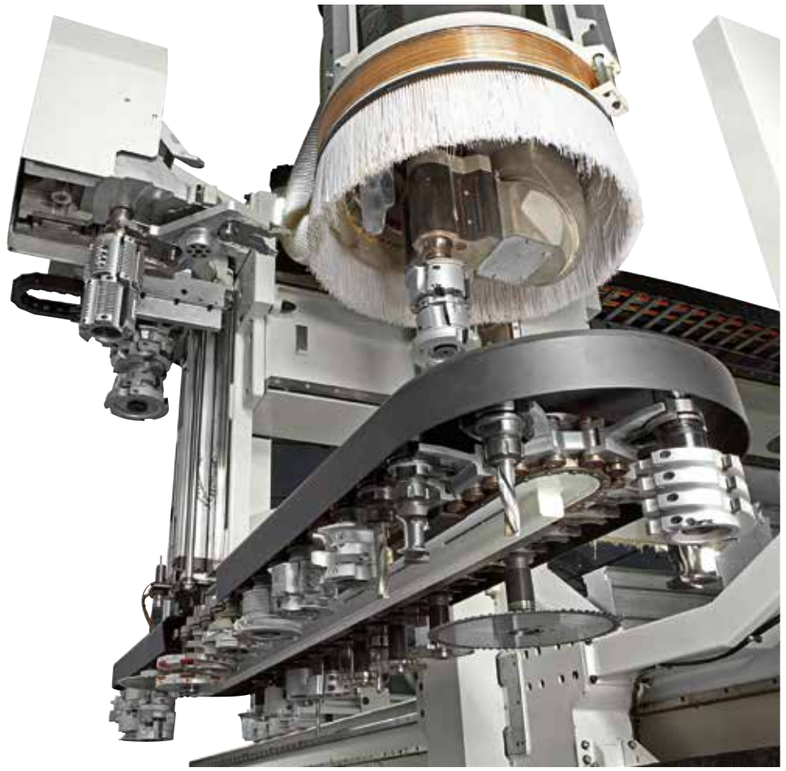


The X axis movement uses a gantry system with **double rack and pinion and dual motor drive**, to ensure the highest movement precision and speed needed when machining of plastics and advanced high-tech materials.

TRC TOOL MAGAZINES

48 or 32 positions
Chain magazine anchored to the moving gantry, developed for handling large and heavy tools.

MACH 5
This device performs a tool change in just five seconds, drastically reducing downtime time.

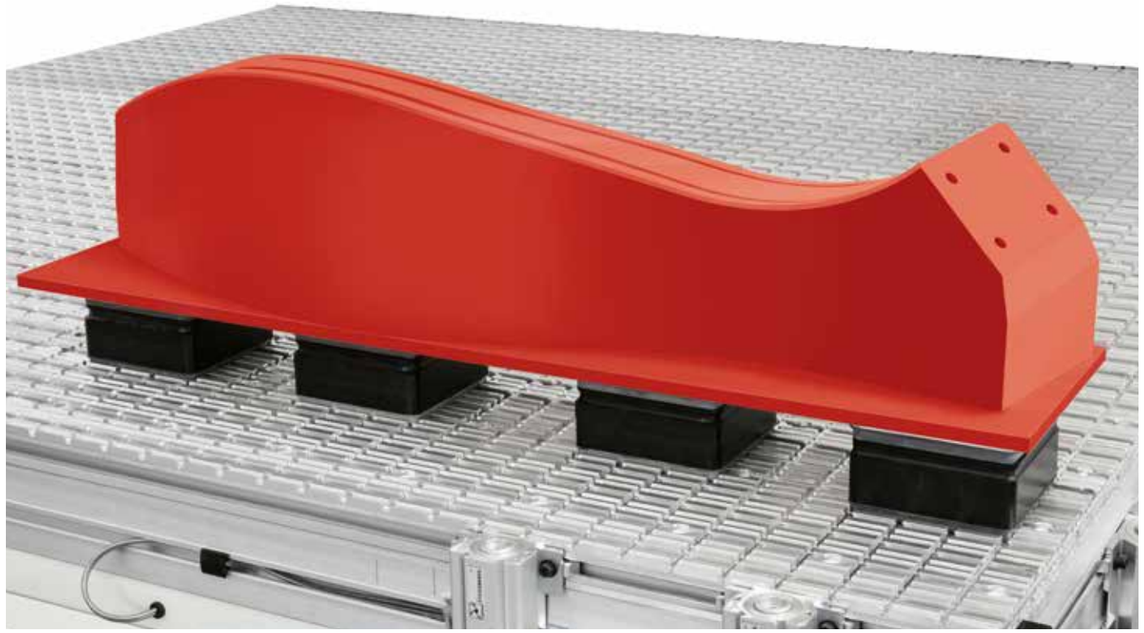


RAPID
24 or 16 positions
Circular magazine anchored to the moving gantry so that all tools are always available.

RAPID 12 ON-BOARD
12 positionsi
Circular magazine located on the operating unit to perform main spindle tool changes during drilling operations.

TR 12
12 positions
Maximum efficiency with a linear magazine to the right of the worktable.

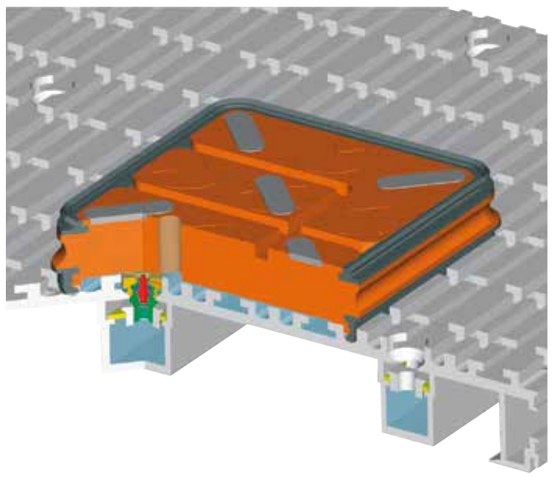
MULTIFUNCTION WORKTABLE



MULTIFUNCTION WORKTABLE

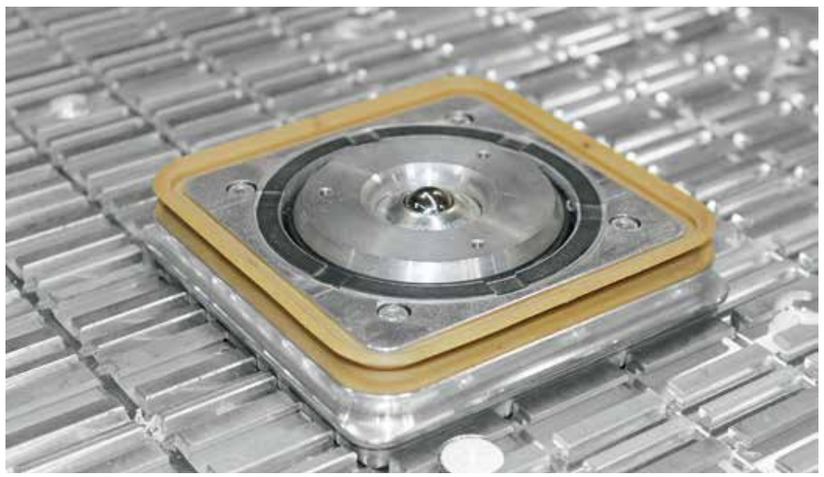
The aluminum worktable ensures maximum machining reliability. It features perfect flatness and ensures clamping and machining precision during both nesting and machining of components made from advanced materials.

The vacuum system passes directly inside the aluminum extrusions and is distributed via a grid of channels and holes arranged on a pitch of 120 mm over the entire worktable surface.



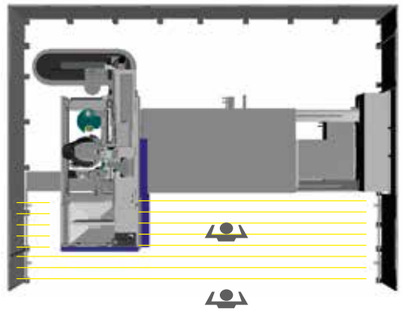
There are T-grooves all over the surface of the bed for securely attaching any jigs and clamping equipment.

The worktable can be configured with countless types of MPS suction cups, adding or removing them easily to suit the type and geometry of the workpieces to be clamped. An ideal solution for making engineering parts from plastics.



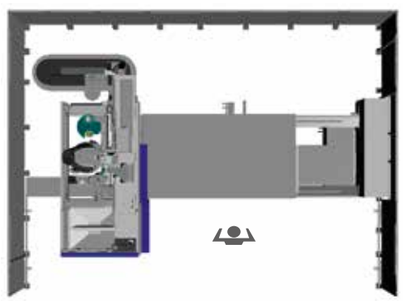
SAFETY SYSTEMS

The operating unit is protected by compact bumpers so that the entire available worktable can be exploited by placing multiple workpieces on it at the same time.



PRO-SPEED

The safety system with horizontal photocells and bumpers, combines maximum worktable accessibility with operator safety while loading and unloading the workpiece, without compromising maximum speed and productivity during machining.



PRO-SPACE

The bumper guard system on the moving gantry is designed to minimize the machine footprint, while ensuring the maximum operator safety with travel speeds up to 25 m/min.

CONFIGURATION OPTIONS

	EVOTECH 250	EVOTECH 400	EVOTECH 500
PRISMA 5-Axis operating unit	✓	✓	✓
3-axis operating unit	✓	✓	-
BRC work unit	-	✓	-
Drilling unit	✓	✓	✓
Chip conveyor on the electrospindle	✓	✓	✓
MACH 5 tool changing device	-	✓	-
TRC 48 tool magazine	-	✓	✓
TRC 32 tool magazine	✓	-	✓
RAPID 24 tool magazine	✓	✓	✓
RAPID 16 tool magazine	✓	✓	✓
RAPID 12 ON-BOARD tool magazine	✓	✓	✓
TR 12 tool magazine	✓	✓	✓

OVERALL DIMENSIONS
MULTIFUNCTION WORKTABLE

X-Y-Z WORK AREA		A	PRO-SPEED B	PRO-SPACE B	C
EVOTECH 250					
3650 x 1320 x 250	mm	7550	5100	4240	2850
4970 x 1320 x 250	mm	8880	5100	4240	2850
6170 x 1320 x 250	mm	10220	5100	4240	2850
3650 x 1600 x 250	mm	7550	5500	4570	2850
4970 x 1600 x 250	mm	8880	5500	4570	2850
6170 x 1600 x 250	mm	10220	5500	4570	2850
EVOTECH 400					
3650 x 1600 x 350	mm	8520	5960	5250	3000
4970 x 1600 x 350	mm	9820	5960	5250	3000
6170 x 1600 x 350	mm	11250	5960	5250	3000
3650 x 2120 x 350	mm	8520	6500	5650	3000
4970 x 2120 x 350	mm	9820	6500	5650	3000
6170 x 2120 x 350	mm	11250	6500	5650	3000
EVOTECH 500					
3650 x 1600 x 500	mm	8440	5700	4670	3600
4970 x 1600 x 500	mm	9850	5700	4670	3600
6170 x 1600 x 500	mm	11130	5700	4670	3600
3650 x 2120 x 500	mm	8440	6260	5100	3600
4970 x 2120 x 500	mm	9850	6260	5100	3600
6170 x 2120 x 500	mm	11130	6260	5100	3600

TECHNICAL DATA

		EVOTECH 250	EVOTECH 400	EVOTECH 500
AXES				
X-Y-Z axis max. speed (PRO-SPEED version)	m/min	60 - 60 - 30	90 - 90 - 30	95 - 90 - 30
X-Y-Z axis max. speed (PRO-SPACE version)	m/min	25 - 60 - 30	25 - 90 - 30	25 - 90 - 30
Workpiece Z-axis clearance (max.)	mm	250	350	500
OPERATING UNIT				
5-axis electrospindle power (max.)	kW	12	17	12
3/4-axis electrospindle power (max.)	kW	15	15	21
5-axis electrospindle rotation speed (max.)	rpm	24000	24000	24000
3/4-axis electrospindle rotation speed (max.)	rpm	24000	24000	24000
DRILLING UNIT				
Vertical and horizontal spindles (max.)	no.	30	30	26
Rotation speed	rpm	8000	8000	8000
TOOL MAGAZINES				
Tool magazine on the operating unit	positions	12	12	12
Rear tool magazine	positions	32	48	48
Side tool magazine	positions	12	12	–
Front tool magazine	positions	–	–	16
INSTALLATION				
Intake air consumption	m^3/h	4430	4430	4430
Compressed air consumption (min.-max.)	Nl/min	350-550	350-550	350-550

Maestro cnc

Office, the Maestro cnc design and programming system ensures that milling, drilling, cutting, etc. machining processes can be programmed quickly and easily.

This is due to the 3D graphical representation of the workpieces and the support provided by the ready-to-use apps and macros to create any machining process with a click of the mouse. Another click and the CNC programs are generated automatically.

SOFTWARE

OFFICE

Maestro cnc

THE SOFTWARE THAT MAKES WORK EASIER

CAD/CAM programming software for designing any production process. Developed in the Windows® environment, this advanced, simple and user-friendly sketching environment provides customers with all the tools they need for drawing parts and arranging them on the worktable, and managing the tools and related machining, all in a perfectly integrated and high-performance context, making programming very easy.

ADDITIONAL FUNCTIONS

Maestro pro view - **Unique for 3D simulation**
3D simulator that gives the users a three-dimensional model of their machine in order to view the machining processes that will be performed during production in advance on their PC in the office.

Maestro 3d - **Unique for creating 3d objects**
Integrated module for programming three-dimensional objects on 5-axis machining centers.

Maestro apps - **Unique for know-how**
Maestro apps is a library of immediately available and easy-to-use programming functions, developed specifically for machining parts from plastics.

Maestro msl connector - **Full integration**
Connect with third-party design software.

Maestro active cnc

Maestro active is our new interface. An operator can easily guide different machines as the Maestro active interface software maintains the same look&feel, icons and approach to interaction.

EASE OF USE
The new interface has been specially designed and optimized for immediate use via a touch screen. Graphics and icons have been redesigned to make navigation simple and comfortable.

ZERO ERRORS
Improved productivity with built-in help and recovery procedures that reduce the possibility of operator error.

SOFTWARE

FACTORY

Maestro active cnc

REVOLUTIONARY INTERACTION WITH YOUR CMS MACHINE TOOL FOR MACHINING PLASTIC

MAXIMUM CONTROL OF PRODUCTION PERFORMANCE
Generating customizable reports by operator, shift, schedule, timeframe (and more) makes it possible to monitor, optimize and improve production performance.

FULL KNOWLEDGE OF MACHINE EVENTS AND SHARING OF OPERATOR EXPERIENCE

Maestro active records maintenance, training and other events, tracking all activities within a database. The ability to comment and document all production events or notifications stores the operator's know-how and makes it available to the company.

ADVANCED PRODUCTION ORGANIZATION
Maestro active can configure different users with different roles and responsibilities depending on how they use the machine (e.g. operator, maintenance technician, administrator, ...).
It is also possible to define work shifts on the machine and then measure the activities, productivity and events that occurred during each shift.

ABSOLUTE FINISHED PART QUALITY
With Maestro active, the quality of the finished part is no longer jeopardized by worn tools. The new Tool Life Determination System in Maestro active sends notification messages as the end of tool service life approaches, and recommends replacement at the most opportune time.

TOOLING? NO PROBLEM!
Maestro active guides the operator through tool magazine set-up, taking the programs to be executed into account.

THE RANGE OF CMS ADVANCED MATERIALS TECHNOLOGY

MONOBLOC CNC MACHINING CENTERS FOR VERTICAL MILLING

ANTARES MK3

ARES

ETHOS K

GANTRY CNC MACHINING CENTERS FOR LARGE-SIZE WORK AREAS

ETHOS

POSEIDON

CONCEPT

3/5-AXIS CNC MACHINING CENTERS, PASSAGE IN Z UP TO 500 MM

EVOTECH

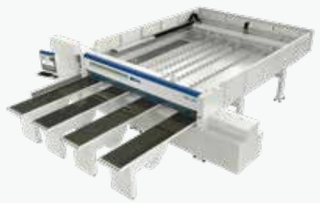
SOLUTIONS FOR ADDITIVE MANUFACTURING

KREATOR ARES

MONOBLOC CNC MACHINING CENTERS FOR HORIZONTAL MILLING

IKON

BEAM-SAWS

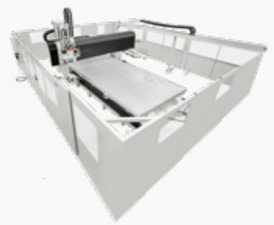


HELIX

FOR COMPOSITES, ALUMINUM AND METAL PROCESSING

FIXED AND MOBILE BRIDGE CNC MACHINING CENTERS

FXB



MBB

AVANT CARAVAN

CNC MACHINING CENTER FOR THE EYEWEAR INDUSTRY

MONOFAST EVO

WIND BLADE WORKING SYSTEMS

EOS

CNC MACHINING CENTERS FOR GUNSTOCKS PROCESSING

MULTILATHE

MONOFAST GUNSTOCKS

KARAT

WATERJET CUTTING SYSTEMS

TECNOCUT PROLINE

TECNOCUT SMARTLINE

ACEVOTE-0625E

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