

accord 50 fx

numeric control machining centre



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numeric control **machining centre**

5-Axis machining centre with fixed worktable and mobile gantry, designed for manufacturing complex-shaped and large-sized objects. It meets the needs of many sectors, from design elements in wood to applications for plastic and advanced materials.

PERFORMANCE AT THE TOP

Designed for **productions without limits of shapes and materials**. The freedom of the **5-axis technology at the service of multiple applications**: panels, curved plywood, elements in solid wood, plastic, composites, resins, light alloys, prototyping, modeling and molds.

GREAT FINISH QUALITY

Precision and finish quality at the highest level on the entire work area, thanks to the powerful machining head for heavy duty processing.

ERGONOMIC AND SAFE

The new Pro-Speed system with horizontal photocells and bumpers on the movable guard combines **maximum access to the worktable and total operator safety** during work piece loading/unloading. During machining, the top speed can be reached for maximum productivity.





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technological **advantages**



LARGE MACHINING VOLUME

The increased stroke of the vertical axis allows machining of **work pieces up to 500 mm in height**, using tools also with large dimensions.



RELIABLE TECHNOLOGY

The **SCM aluminium multi-function worktable** ensures **maximum reliability**. Characterized by a perfect lasting planarity, it does not deform despite changes in ambient factors such as temperature and humidity.



SMART PROGRAMMING

Thanks to the Xilog Maestro software suite developed by SCM, programming is easy, intuitive, effective.

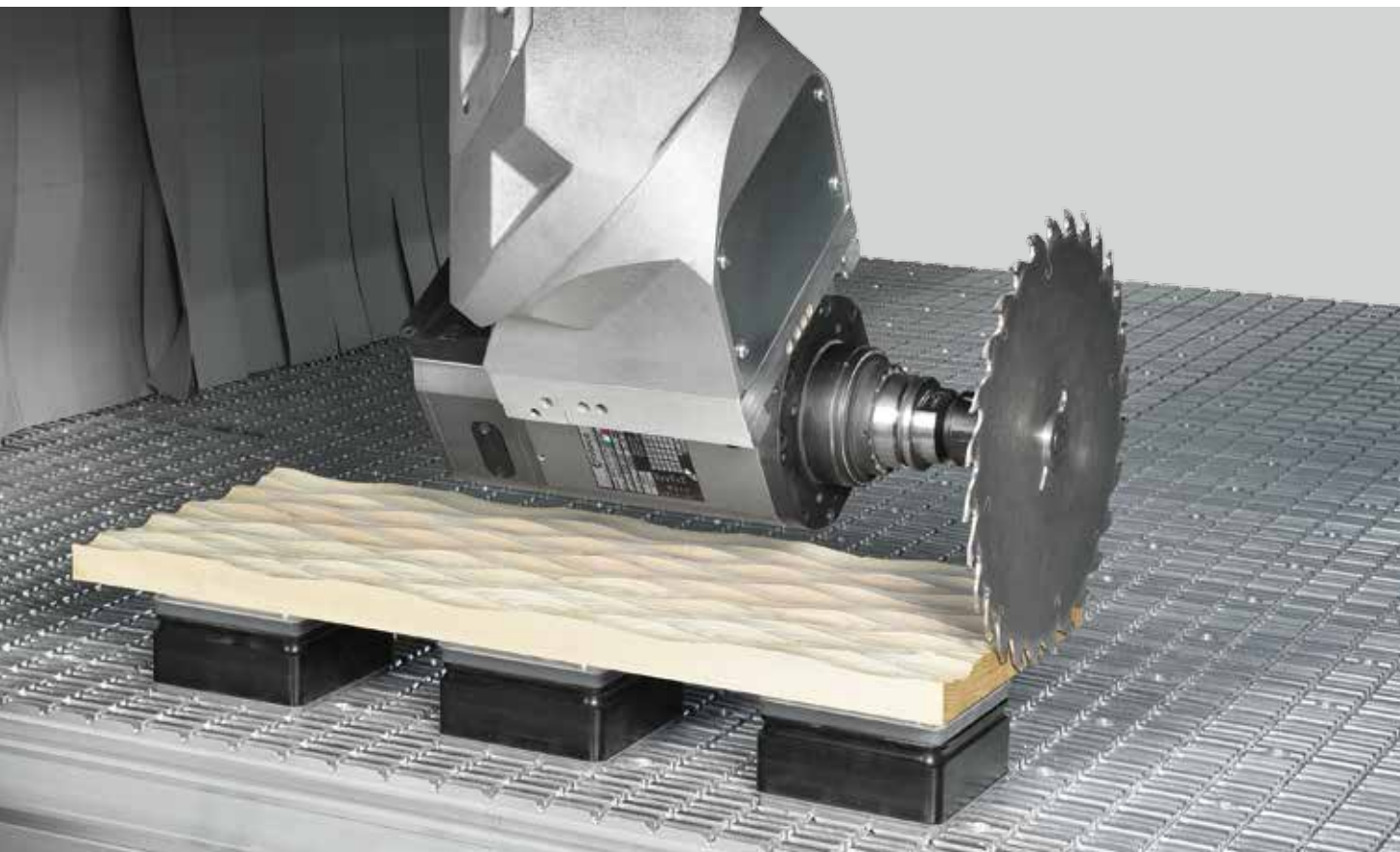
- Maestro 3D** integrated module for 5-axis machining of 3D surfaces
- Maestro Pro View** simulator, for visualizing in advance the machining operations to be carried out on the machine on a PC in the office.



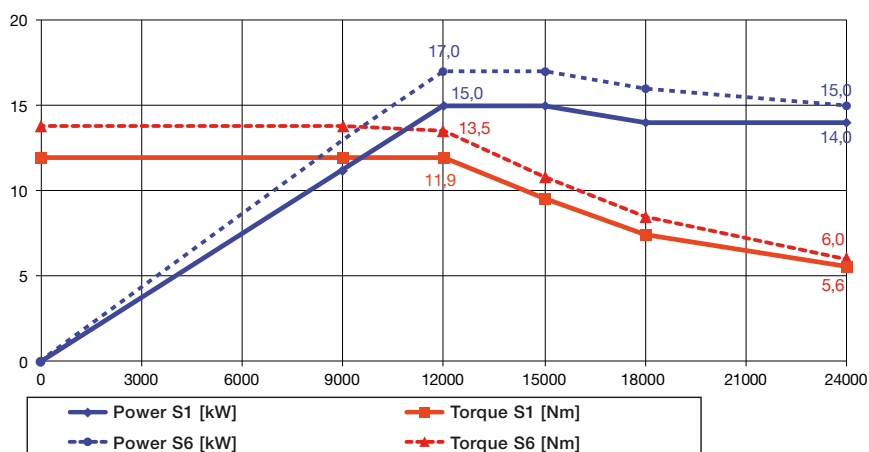
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Prisma 5-axis machining unit

The unique construction geometry of the 5-axis machining unit gives **high power and compact dimensions**.

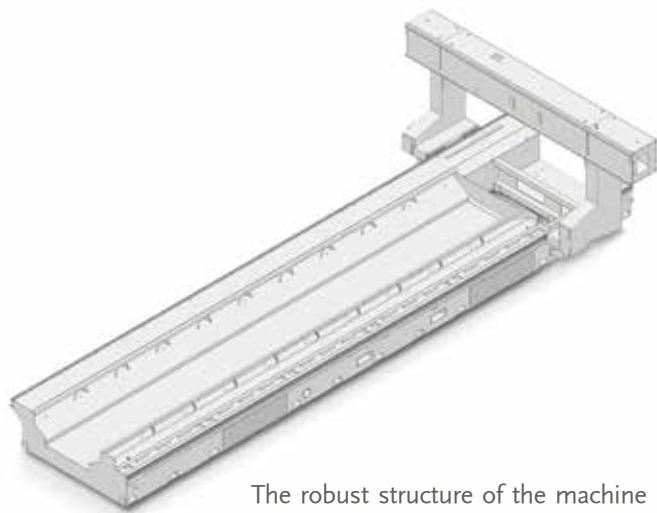
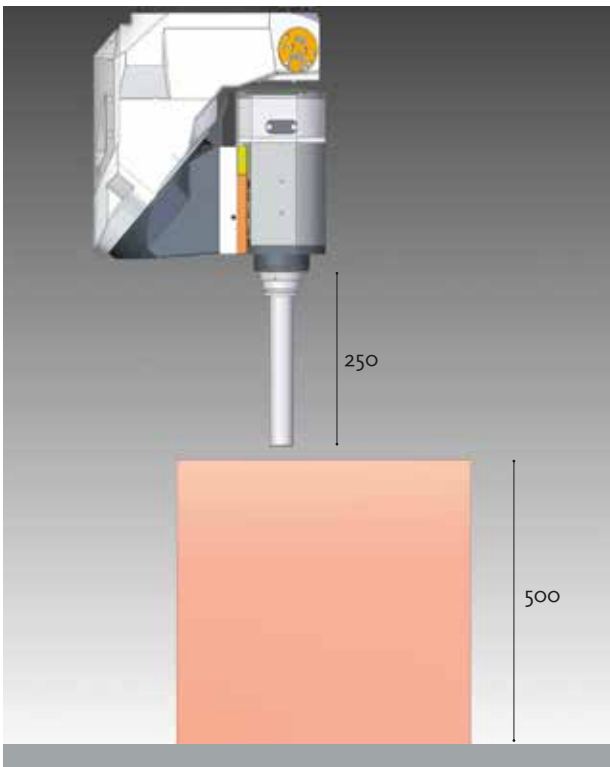


The electrospindle, designed and manufactured by SCM, develops an output of **17 kW** and reaches maximum rotation speed of **24000 rpm**. Excellent performances making the machine optimal both for **routing with heavy stock removal** and **profiling at high rotation speed**.





It is possible to process **work pieces with 500 mm working height**, on both upper side and lateral sides, thanks to the high Z-axis vertical stroke.



The robust structure of the machine and the architecture of the machining unit allow the tool to **move freely around parts of complex shape**, and perform three-dimensional machining with high precision and maximum finish quality.

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Prisma 5-axis machining unit

Particular attention is paid to machine cleaning and clean working environment . The coaxial **double exhaust hood** allows the extraction of shavings and sawdust in the various use conditions.



While routing with the tool in vertical position, it is utilized the **inner hood**, which is more effective for this kind of operations, thanks to its reduced dimensions.

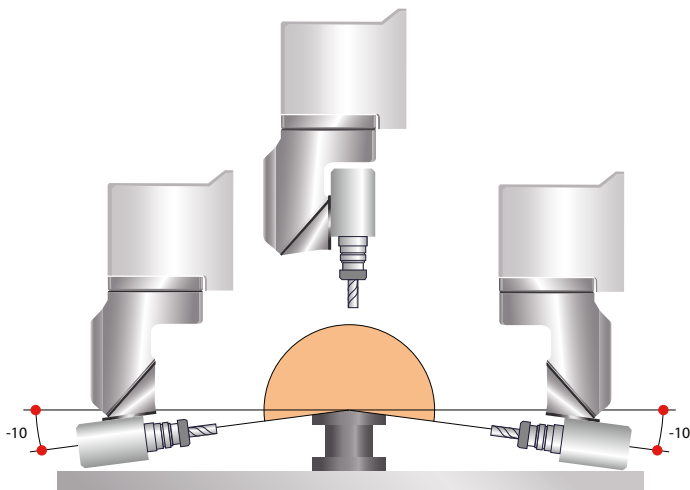
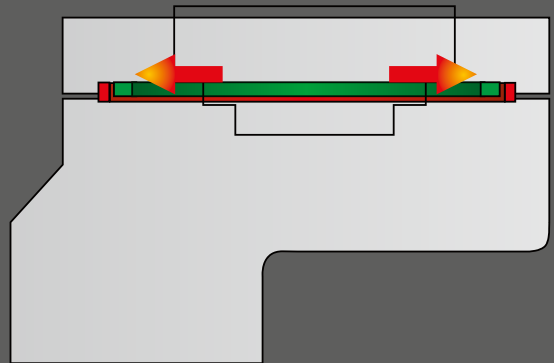


During 5-axis routing, it is utilized the **outer hood**, which has adequate dimensions to cover all tool movements.

The **conveyor** is particularly useful during machining with tools in vertical position and heavy stock removal. It is automatically directed towards shavings ejection.



The **TTS (Total Torque System)**, unique to SCM, mechanically locks the rotating axis during machining with tools in vertical position, increasing system stiffness.



Prisma machining unit geometry allows it to operate at **angles of up to 10°** below the work piece supporting surface.

GUARANTEED PRECISION OF THE 5-AXIS MACHINING HEAD

RTCP – Rotation Tool Center Point System

It is possible to reset the parameters of the 5-axis machining head automatically, thanks to a **self-calibration system** and a **software function** available with the machine, both developed by SCM.



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aggregate machining units

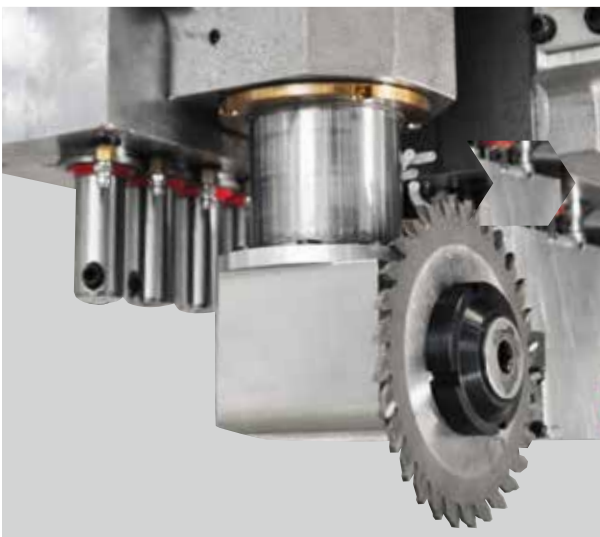
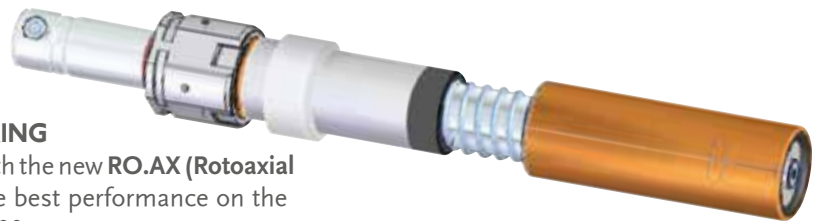
BORING UNIT

We provide the optimum solution to any boring needs with our wide range of modules, equipped with **vertical and horizontal independent boring units**.



RO.AX SPINDLE, FOR PERFECT BORING

There is no backlash during machining with the new **RO.AX (Rotoaxial spindle technology)**. The spindle with the best performance on the market, with speeds of rotation up to **8000 rpm**.



For cutting, a dedicated blade unit can be fitted, either in a **fixed position** or with **adjustable angle 0-90°**.

tool stores

RAPID 12 ON BOARD

12 position circular store anchored to the machining head. The tool changeover takes place during drilling operations reducing cycle-time.



RAPID 24

24 position circular store: the universal solution for machining panels and non-wood materials.



TRC 32/TRC48

32 or 48 position chain store, anchored to the mobile gantry, developed for managing heavy and large tools.



TR 12

12 position straight store, to the right of the worktable, so that all tools are always available within the machine.

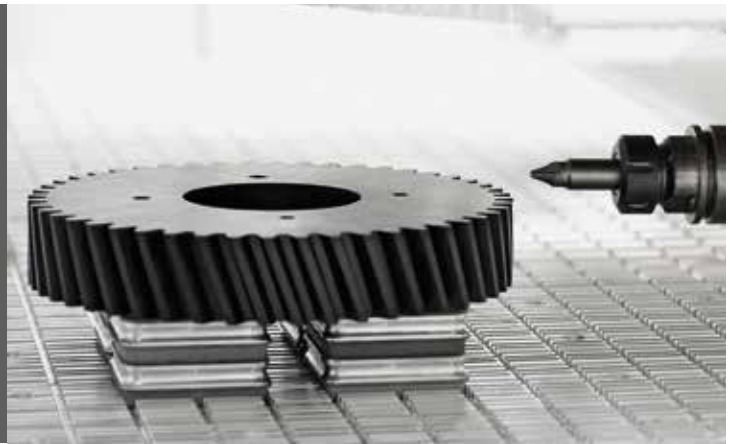


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worktables

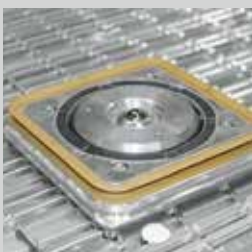
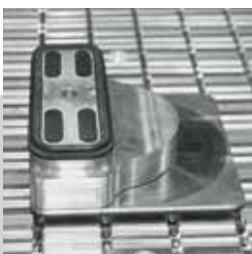
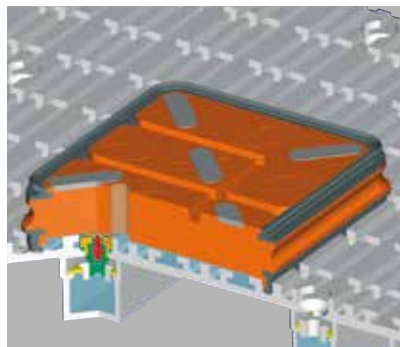
MULTI-FUNCTION WORKTABLE

Suitable for any need of referencing and clamping. The rigid aluminium structure guarantees lasting perfect planarity. For improved precision, the worktable is grooved directly on the machining centre.



INTEGRATED VACUUM SYSTEM

The vacuum system is formed directly within the extruded aluminium parts and distributed on a grid of holes spaced at 120 mm on the whole surface of the worktable.



MPS SUCTION CUPS

The network of holes and channels allows suction cups to be positioned and secured according to requirements. SCM makes available a wide range of suction cups with different shapes and sizes.

The laser pointer helps the operator with the set-up.

JIGS OR FIXING EQUIPMENT

On the entire surface of the worktable there are T-grooves allowing any additional equipment not supplied by SCM to be secured in place.



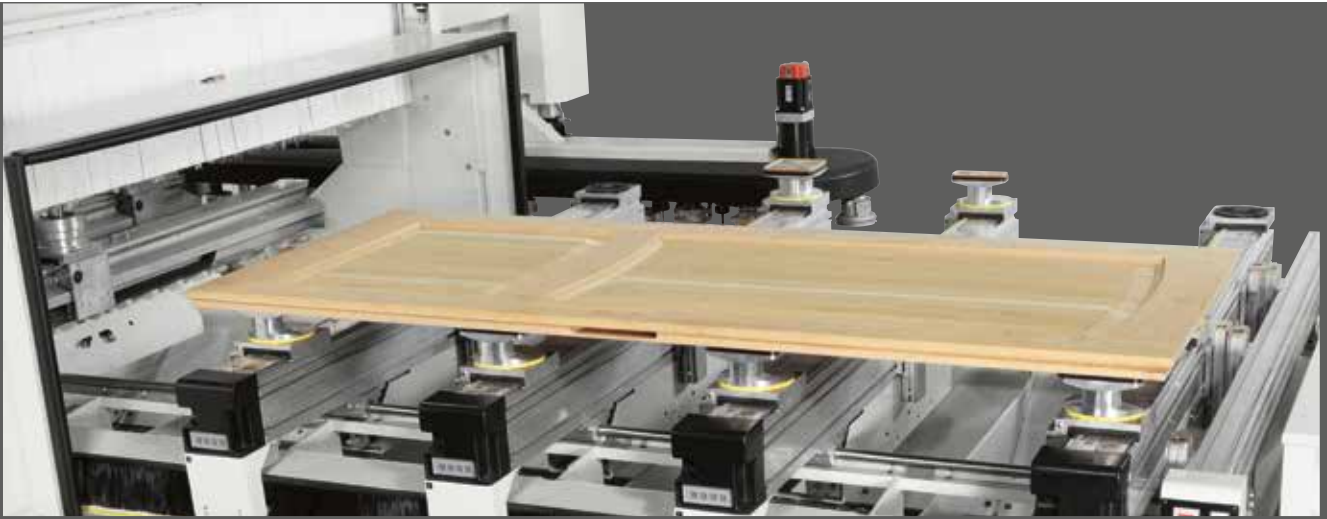
NESTING

The vacuum system uses channels sized for the passage of a large volume of air, to guarantee **direct, optimum work piece hold-down.**



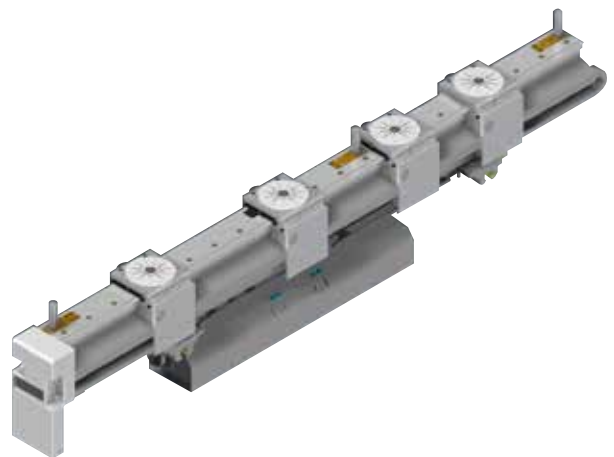
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worktables



MATIC WORKTABLE

Fully automated, managed directly by the machine's Xilog Maestro software. It allows complete set-up in seconds.

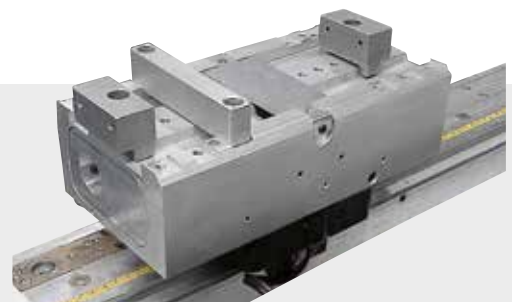


The bars and bases are moved using a rack and pinion **direct transmission system** and have **independent drive units**. These exclusive, high-tech design solutions allow fast, precise positioning.



Switching from suction cups to clamps and vice versa is quick and easy. The quick coupling developed by SCM allows operators to change the accessory at the press of a button.

The high component passage allows the use of **locking clamps with 145 mm height (H145)**. Machining with **double profile tool** is possible, together with processing of **elements with different thickness, from 60 to 120 mm**, without the need of manual set-up.



Clamps of different types: with round or square base, vertical or horizontal, optimal for the pneumatic locking of any work piece.

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worktables

START WORKTABLE

Worktable with manual movement: pneumatic locking clamps or suction cups can be used on each movable bar. It provides maximum freedom for machining elements having different shapes and sizes.



The quick coupling and “tubeless” vacuum transmission system make the worktable freely configurable depending on the geometries of the work pieces to be machined.



PILOT WORKTABLE

Semi-automatic worktable: the operator is guided by the machine for worktable preparation. The position of the hold-down elements is shown on a colour touch-screen display on the “TecPad” remote console.

Positioning values are displayed and highlighted in real time until the correct position is reached.

The risk of collisions is eliminated: special sensors detect any incorrect positioning and prevent the program from continuing.

safety systems

PROSPACE

The bumper system designed to minimise the machine footprint, guarantees maximum operator safety, with a **top speed of 25 m/min.**



PROSPEED

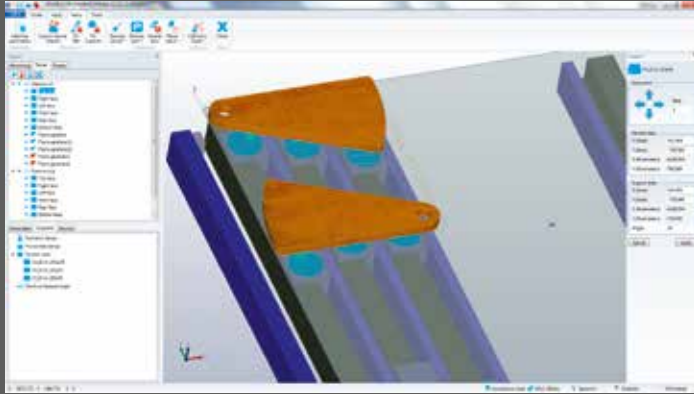
In addition to the bumpers there is a barrier composed of horizontal photocells which detect operator presence. In this way, when the operator is outside the loading zone, the **machine's top speed goes up to 95 m/min.,** reducing cycle time and increasing productivity.

The control unit is positioned on a mobile console for the free use by the operator.



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Xilog Maestro software suite



MAESTRO UNIQUE CREATIVITY

We provide the technical know-how so that you can free your creativity.

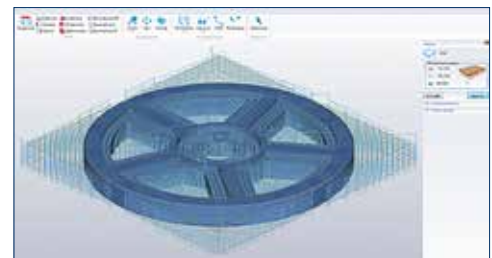
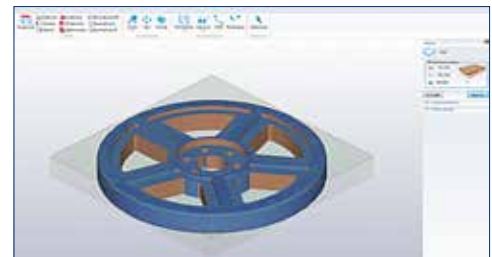
CAD/CAM programming software to design all the production processes. Developed in Windows® environment it ensures easy programming with an advanced, simple and intuitive sketching environment that features all the tools necessary to design the parts, their layout on the worktable, tools management and the relative machining operations. All the procedures are contained in a perfectly integrated and high performance software.

Advanced programming ensures great performance.

MAESTRO 3D UNIQUE IN THE CREATION OF 3D OBJECTS

The module integrated in the Xilog Maestro suite is designed to program three dimensional objects on 5-axis machining centres. It includes powerful CAD tools to manage extremely complex surfaces. The best solution for a wide range of 3 and 5-axes machining operations.

Any object, however complex, can be simply and quickly created.



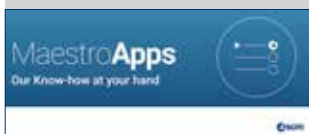
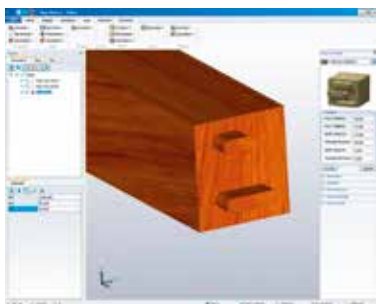
MAESTRO WD UNIQUE IN DESIGNING DOORS AND WINDOWS

The application included in the Xilog Maestro suite is designed for planning and programming each single part of linear and arc-shaped windows, doors and shutters. The user starts by defining the wall opening and selecting the model to be produced, then the software generates all the individual parts to be produced in the machine, with a state of the art graphic editor. Maestro WD adds planning and programming to the functions used to manage the worktables and the macro-machining operations for door and window frames.

Door and window frames of any dimension and shape with the maximum ease and execution speed to achieve a customised product.



A **UNIQUE** suite



MAESTRO APPS UNIQUE KNOW-HOW

Maestro APPS is a library of programming functions that are always available and easy to use, developed by the SCM for the production of parts for doors, windows, stairs, furniture and furnishings. A simple “click” allows users free access to the SCM technological know-how.

Save time during the workpiece planning and achieve a faster and more efficient production.



MAESTRO PRO VIEW UNIQUE 3D DISPLAY

Maestro Pro View is a 3D simulator that allows users access to a three dimensional model of their machine in their office and view the operations that will be carried out during the production in advance on their PC.

- Real representation of the workpiece being machined and the machine parts
- Real representation of the material removed during machining
- Generation of collision control reports
- Prevention of any possible programming errors
- Generation of work cycle execution times reports.

Calculation of the production costs and greater production efficiency.

MAESTRO MSL CONNECTOR UNIQUE CONNECTION

Simple connection with external software houses.

TheXilog Maestro suite features the MSL Connector which allows external softwares to interface with all SCM machining centres and makes it easier to manage the machining strategies.

Their specialisations, our control.

The software-houses will no longer have to assume worktable management (workpieces positioning and hold-down, tool paths). SCM will provide the complete machine management.

Eliminates the customisation costs for the external software house, resulting in a considerable saving for the client.



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technical features

ACCORD 50 FX • ACCORD 50 FXM

technical data

NUMERIC CONTROL MACHINING CENTRE			
AXES	X-Y-Z axes speed	m/min	95 (25) - 80 - 30
MACHINING AREA X	Bars worktable	mm	3680 - 5020 - 6360
	Multi-function worktable	mm	3650 - 4970 - 6170
MACHINING AREA Y	Bars worktable	mm	1680 - 1905
	Multi-function worktable	mm	1600 - 2120
WORKPIECE PASSAGE		mm	500
MACHINING HEAD	Electrospindle power	kW	17
	Max. rotation	rpm	24000
TOOL MAGAZINES	Tool store to the machining head	n° pos.	12
	Rear tool store	n° pos.	24 - 32 - 48
	Side tool store	n° pos.	12
BORING UNIT	Vertical and horizontal spindles	n°	from 12 up to 26
	Max. rotation	rpm	8000
INSTALLATION	Main suction opening diameter	mm	300
	Additional suction opening diameter	mm	100
	Suction air consumption	m ³ /h	7000
	Compressed air consumption	NI/min	350
	Machine weight	Kg	9000 - 12000

SAVENERGY High performance and energy saving

- Optimum feed speed depending on the material and tool
- Optimisation of compressed air consumption
- Optimisation of vacuum pump speed of rotation, depending on the vacuum required
- Electrospindle heat exchanger management, depending on the operating temperature
- Automatic switch to stand-by for motors not being used for machining, manual or NC
- Opening of the exhaust outlets related to the machining in progress

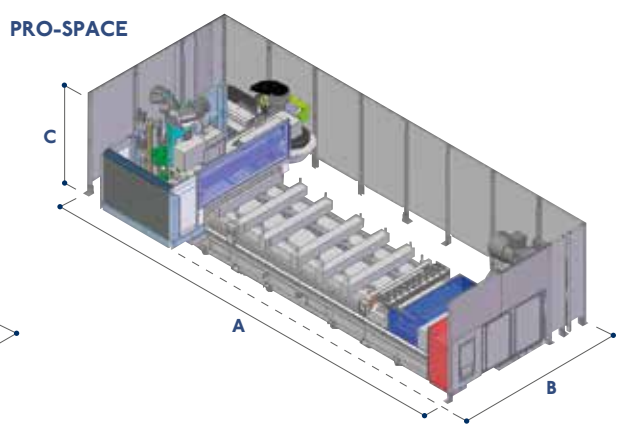
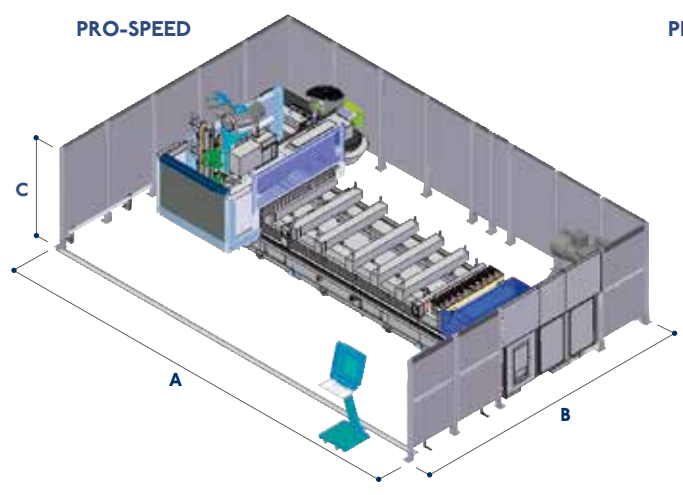


SAVENERGY

ACCORD 50 FX • ACCORD 50 FXM overall dimensions

X-Y-Z MACHINING AREA (MM)	A	B*	C
ACCORD 50 FX PRO-SPEED			
3680 x 1680 x 500	7770	5410	3650
5020 x 1680 x 500	9110	5410	3650
6360 x 1680 x 500	10450	5410	3650
3680 x 1905 x 500	7770	5635	3650
5020 x 1905 x 500	9110	5635	3650
6360 x 1905 x 500	10450	5635	3650
ACCORD 50 FXM PRO-SPEED			
3650 x 1600 x 500	7770	5330	3650
4970 x 1600 x 500	9110	5330	3650
6170 x 1600 x 500	10450	5330	3650
3650 x 2120 x 500	7770	5850	3650
4970 x 2120 x 500	9110	5850	3650
6170 x 2120 x 500	10450	5850	3650
ACCORD 50 FX PRO-SPACE			
3680 x 1680 x 500	7770	5010	3650
5020 x 1680 x 500	9110	5010	3650
6360 x 1680 x 500	10450	5010	3650
3680 x 1905 x 500	7770	5235	3650
5020 x 1905 x 500	9110	5235	3650
6360 x 1905 x 500	10450	5235	3650
ACCORD 50 FXM PRO-SPACE			
3650 x 1600 x 500	7770	4930	3650
4970 x 1600 x 500	9110	4930	3650
6170 x 1600 x 500	10450	4930	3650
3650 x 2120 x 500	7770	5450	3650
4970 x 2120 x 500	9110	5450	3650
6170 x 2120 x 500	10450	5450	3650

* with Rapid 24 the dimension B increases of 380 mm



THE STRONGEST WOOD ARE IN OUR DNA

SCM. A HERITAGE OF SKILLS IN A UNIQUE BRAND

Over 65 years of success gives SCM the centre stage in woodworking technology. This heritage results from bringing together the best know-how in machining and systems for wood-based manufacturing. SCM is present all over the world, brought to you by the widest distribution network in the industry.

65 years history

3 main production sites in Italy

300.000 square metres of production space

17.000 machines manufactured per year

90% export

20 foreign branches

350 agents and dealers

500 support technicians

500 registered patents

In SCM's DNA also strength and solidity of a great Group. The SCM Group is a world leader, manufacturing industrial

SCM GROUP, A HIGHLY SKILLED TEAM EXPERT IN INDUSTRIAL

INDUSTRIAL MACHINERY

Stand-alone machines, integrated systems and services dedicated to processing a wide range of materials.



WOODWORKING TECHNOLOGIES



TECHNOLOGIES FOR PROCESSING
COMPOSITE MATERIALS, ALUMINIUM,
PLASTIC, GLASS, STONE, METAL



The technical data can vary according to the requested machine composition. In this catalogue, machines are shown with options. The company reserves the right to modify technical specifications without prior notice; the modifications do not influence the safety foreseen by the CE Norms.

TECHNOLOGIES



equipment and components for machining the widest range of materials.

MACHINES AND COMPONENTS

INDUSTRIAL COMPONENTS

Technological components for the Group's machines and systems, for those of third-parties and the machinery industry.

HITECO

SPINDLES AND TECHNOLOGICAL
COMPONENTS

Les

ELECTRIC PANELS

steelmec

METALWORK

scmfonderie

CAST IRON



SCM GROUP SPA

via Casale 450 - 47826 Villa Verucchio, Rimini - Italy
tel. +39 0541 674111 - fax +39 0541 674274
housing@scmgroup.com
www.scmwood.com



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