

morbidelli cx210/cx220

CNC drilling centres



THE MAXIMUM OF TECHNOLOGY



AT YOUR FINGERTIPS

MORBIDELLI CX210/CX220



EASY, INTELLIGENT, COMPACT

MORBIDELLI CX210/CX220

COMPLETE



Top technology in less than 10 square metres.

Real batch 1, fully processed parts on a single machine: drilling, grooving, routing and doweling.

TOP QUALITY



70% faster on drilling cycles thanks to 2 heads with independent Y and Z axes working simultaneously.

Unrivalled drilling precision with the new RO.AX technology (Rotoaxial spindle technology), the most efficient spindle on the market with rotation speed up to 8000 rpm.

Improved versatility: not limited to only drilling with its dedicated unit for "Clamex" type connections.

Highly functional and reliable: the ideal electrospindle for local routing operations on various types of panels.

FASTER



No set up: no manual interventions on the machine... ALWAYS READY TO GO!

6-positions tool changer: all the required tools **always available on board**.

No repositioning and **faster machining cycles**, thanks to the dual shaped clamps, to execute any type of drilling.

PRECISE



No scratches thanks to the properly designed work table with rollers capable of processing also delicate panels.

No mistakes thanks to "3D PROBE", which can detect the reference for any drilling on 5 sides of the panel.

MODULAR



No stop processing: possibility of automatic unloading of pieces returning them to the operator for continuous production.

DIGITAL



CAD/CAM programming software to design all the production processes.

Maestro cnc allows easy, quick and errorless machine management.

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Technical data

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Service - Spare parts

TECHNICAL FEATURES OVERVIEW

EXCLUSIVE ADVANTEGES

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High flexibility: all the required tools always available on board thanks to the 6-positions automatic tool changer.



No scratches thanks to the new work table capable of processing lacquered and delicate panels.



No repositioning and faster machining cycles thanks to the dual shaped clamps, to execute any type of drilling.



All the machine functions can be managed with a simple touch, thanks to the industrial PC "eye-M" with full HD multi-touch color display with 21,5" screen size.



Not only drilling: dedicated unit for "Clamex" type connections.

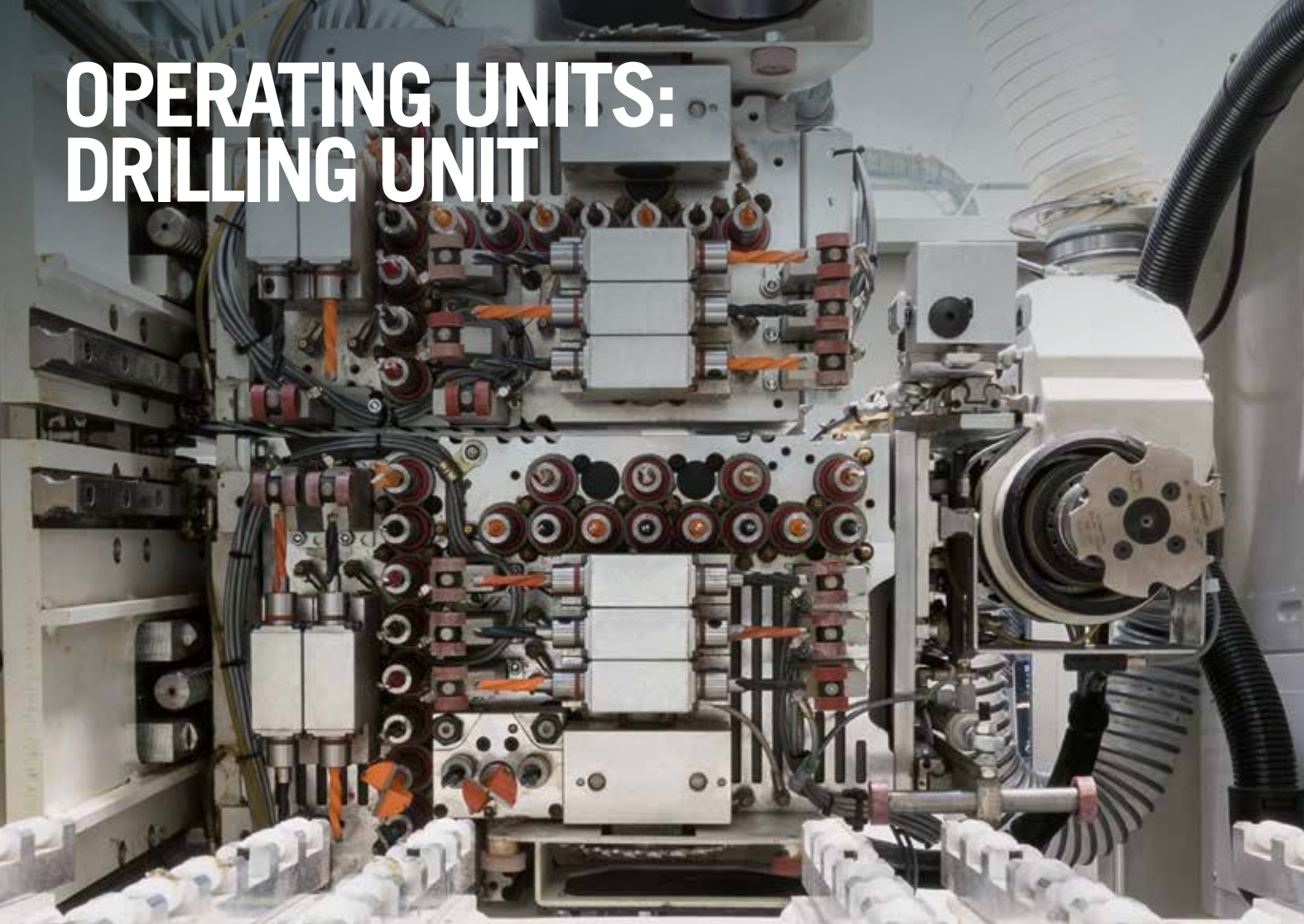
70% faster on drilling cycles thanks to 2 heads with independent Y and Z axes working simultaneously.



Very high quality during the machining with the new RO.AX technology (Rotoaxial spindle technology), the most efficient spindle on the market with rotation speeds up to 8000 rpm.

Complete cycle with the dowel insertion device installed on the main Y carriage.

OPERATING UNITS: DRILLING UNIT



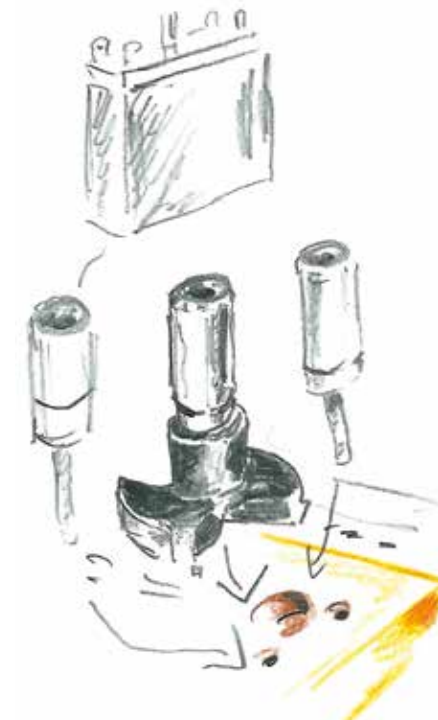
TAYLOR-MADE

The drilling unit has been specifically designed to have any tool always available on board to achieve all drilling operations in a few steps:
2 heads with Y and Z independent axes working simultaneously and enhancing the productivity.



Up to 55 RO.AX spindles (Rotoaxial spindle technology) on the double drilling head to execute all drilling operations without any need of manual intervention.

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HINGE DRILLING: THE THREE IN ONE SOLUTION!

Possibility of carrying out 3 simultaneous drillings with a single head integrated in the main drilling unit.



NOT ONLY DRILLING...

INCOMPARABLE

OPERATING UNITS DESIGNED TO MEET ANY REQUIREMENT!

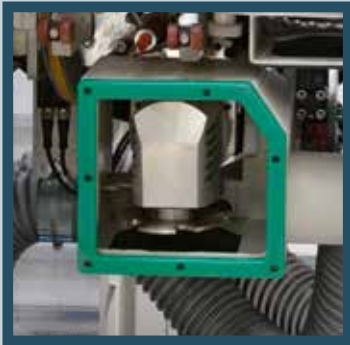


ANY ROUTING PROCESS

Highly functional and reliable: the **7.5 kW electrospindle** with HSK63-F taper and rotation speed up to 24.000 rpm, is the ideal solution for local routing operations on various types of panels.

NOT ONLY DRILLS

Dedicated unit for "Clamex" type connections.

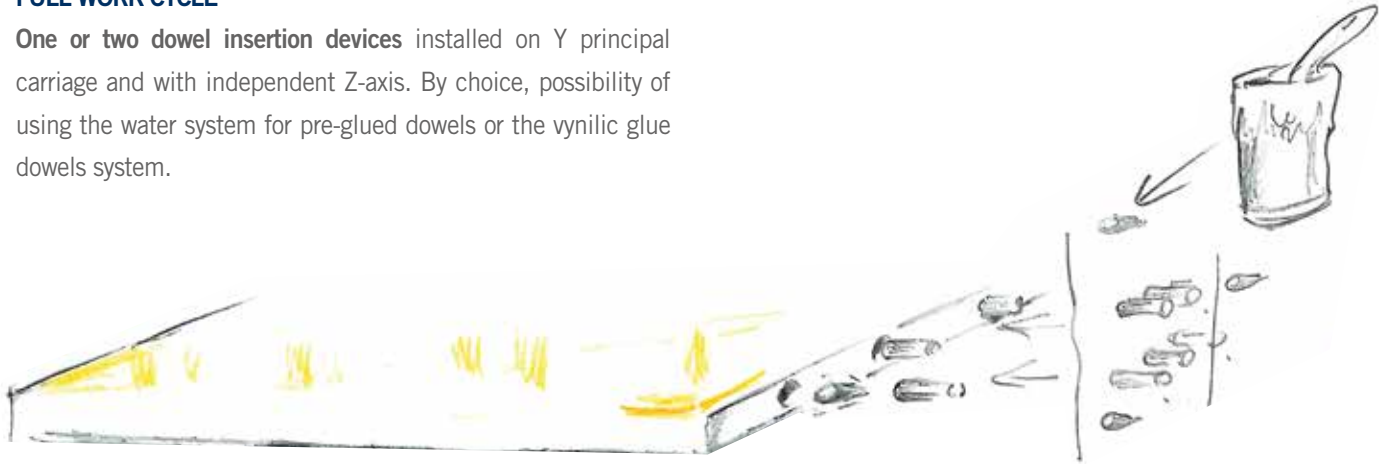


HIGH FLEXIBILITY

All the tools required for any furniture processing always available on board thanks to the **6-positions automatic tool changer**.

FULL WORK CYCLE

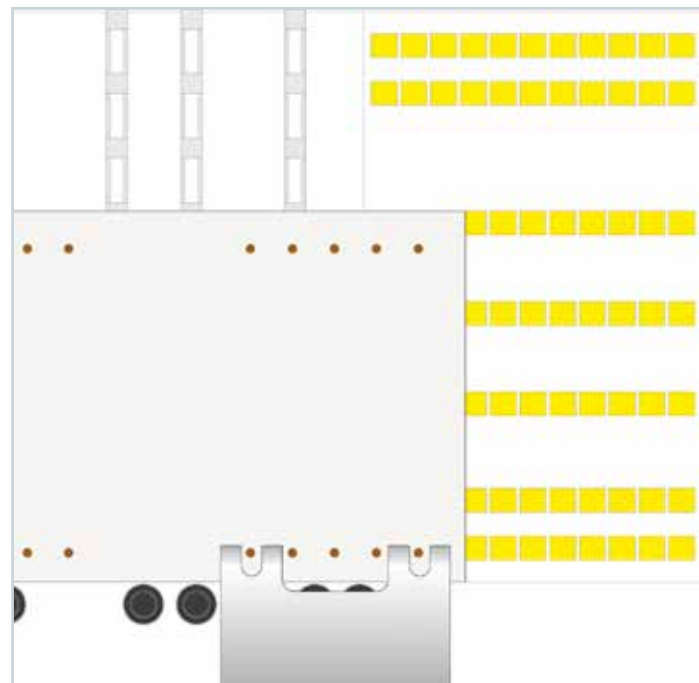
One or two **dowel insertion devices** installed on Y principal carriage and with independent Z-axis. By choice, possibility of using the water system for pre-glued dowels or the vynilic glue dowels system.



WORK TABLE



No scratches thanks to the new work table capable of processing lacquered and delicate panels.



NO REPOSITIONING = MORE PRODUCTIVITY

Two shaped clamps to execute all required drilling operations without any need of repositioning.

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NO MISTAKES THANKS TO "3D PROBE",
the measuring device to detect panel's length,
width and thickness.



Quick and efficient panels loading thanks to the **adjustable mechanical reference stop**.

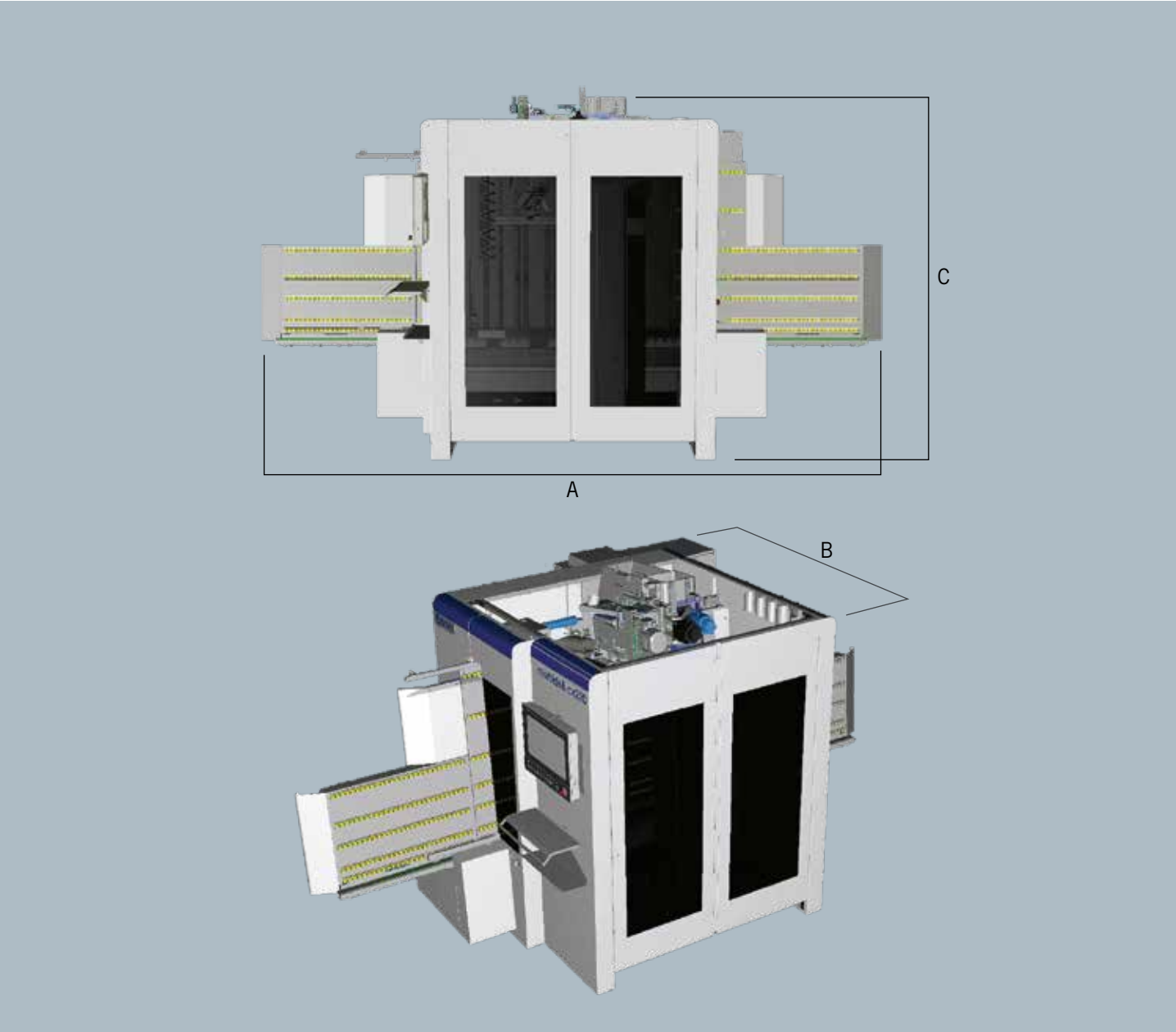
OVERALL DIMENSIONS

NO DOWNTIME – CONTINUOUS CYCLE

Panel return system equipped with side conveyor and a return unit that brings back to the operator the piece just machined.

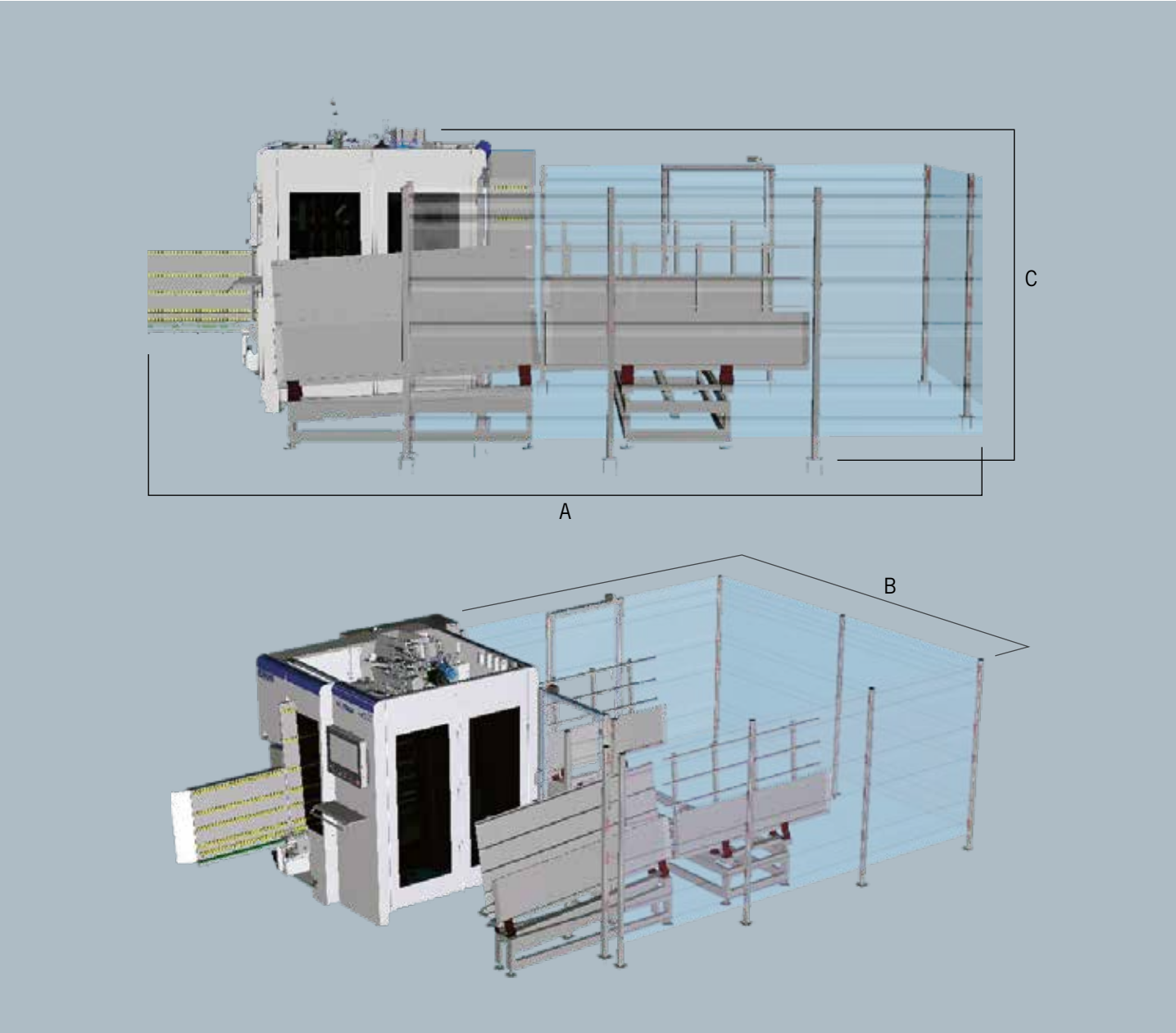
morbidelli cx210/cx220		A	B	C
stand-alone	mm	4700	2265	2850

STAND-ALONE



morbidelli cx210/cx220		A	B	C
with panel return conveyor	mm	6700 / 7230	4070	2850

PANEL RETURN CONVEYOR



M Maestro Digital Systems

SMART SOFTWARE AND DIGITAL SERVICES TO ENHANCE PRODUCTIVITY OF WOODWORKING AND FURNITURE INDUSTRIES.

SCM accompanies woodworking companies throughout their whole process combining machines with matching software solutions and digital services, with a constant strive to enhance company productivity.

The software solutions powered by SCM are developed to optimize machine usage as well as the entire process, providing integration with the different software existing in the company.

design > programming and data generation

Maestro office

Office

Factory

Maestro active

cutting > routing drilling

SOFTWARE

Simple, smart and open
Maestro software are tailored on the machine technology as well as on the entire process. All Maestro software share a common mission:

easy to use, so that any operator can easily and confidently learn and use the software
smart, with algorithms and computing modules aiming at the best possible result

open in order to integrate existing software, and provide customer the coverage of all his process.

DIGITAL SERVICES

Transforming the way it delivers services to its customers through digital technologies and particularly, the IoT platform that collects and analyses data coming from the machine, **SCM created a world of services enabled by Maestro connect.**

Meaning that connecting an SCM machine through Maestro connect will let customer subscribe a program of fast-evolving services and access a wide range of benefits that even go beyond the machine experience and will support and assist you through the whole life-cycle of your machine.

Maestro connect
IoT Platform

1
Machine monitoring,
KPIs, early warning

2
Maintenance
equipment

3
Predictive
maintenance

4
Report and historical
data export to MES

5
Warranty
extension

6
Augmented
remote support

7
Smart learning,
SELF-HEALING, video
tutorials

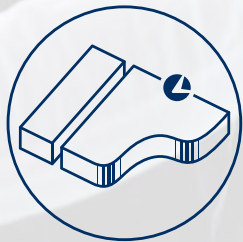
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Asset management
with e-shop SCM
Spare Parts





Maestro cnc

In the office, before the production, the design and programming system Maestro cnc ensures that routing, drilling or sawing can quickly and easily be programmed thanks to 3D graphics of work pieces and machining and clamping aids as well as a smart App and macros library to program any machine operation with a mouse click. Another click away and CNC programs are automatically generated.



SOFTWARE

Office



Maestro active cnc

Maestro active is the new operator interface software which has been unified across all SCM technologies. A single operator can easily and confidently run multiple machines due to controller and interface consistency: regardless the machine, Maestro active maintains the same look&feel, with many identical icons and navigation buttons, thus ensuring the same approach to interaction.

EASE OF USE

The new interface has been specifically designed and optimized for immediate use via touch screen. Graphics have been redesigned for simple and comfortable navigation, with tablet-like icons on touch screen controller.

“ZERO” ERRORS

Improved productivity thanks to integrated help and recovery procedures that reduce the possibility of error from the operator's side.

SOFTWARE

Factory

Maestro cnc

THE SOFTWARE THAT SIMPLIFIES THE WORK

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 work table, tools management and the relative machining operations. All the procedures are contained in a perfectly integrated and high performance software.

ADDITIONAL FUNCTIONS



Maestro apps - Unique know-how

Maestro APPS is a library of programming functions that are always available and easy to use, developed by SCM for the production of parts for doors, windows, stairs, furniture and furnishings.



Maestro msl connector - Total integration

Connector for third-parties with design software.

SPECIALISED MACHINING



Maestro cabinet - Unique in the creation of furniture

This application is designed for the home and office furniture sector to design furniture and program cabinet production step by step.

Maestro active cnc

A REVOLUTIONARY APPROACH TO INTERACT WITH YOUR SCM MACHINE

FULL CONTROL OF PRODUCTION PERFORMANCES

The creation of customizable reports by operator, shift, program, forecast period (and much more) allows to monitor, optimize and improve the production performance.

FULL MACHINE AWARENESS AND KNOWLEDGE MANAGEMENT SYSTEM

Maestro active allows to record the times related to setup, maintenance, training and other events, tracing all the activities in a database. The operator's know-how is also stored and made available to other people inside the organization thanks to the possibility to comment and document all production events or notifications.

ORGANIZE YOUR PRODUCTION

Maestro active allows to create different users with different roles and authorizations (e.g.: operator, maintainer, administrator, ...). Any user can only execute the functions whose permissions have been assigned to him. It is also possible to define the work shifts on the machine and then detect activities, productivity and events that occurred in each shift.

TOTAL QUALITY OF THE FINISHED PRODUCT

With Maestro active the quality of the finished piece is no longer put at risk by worn tools. The new Maestro Active Tool Life Determination system sends notification messages as the tool reaches its end of life and recommends its replacement at the most appropriate time.

TOOLS? NO PROBLEM!

Maestro active guides the operator during the magazine tooling phase, taking into account the programs to be executed.

Maestro connect

CONNECT YOUR MACHINE AND GAIN ACCESS TO A WORLD OF SERVICES

Connecting your machine through Maestro connect will let you subscribe a program of fast-evolving services. You will access a wide range of benefits that even go beyond the machine experience and will support and assist you through the whole life-cycle of your machine.

FASTER SERVICE INTERVENTION AND PROBLEM RESOLUTION

Maestro connect provides real time data and Health Records of the Machine also to SCM Service drastically reducing its troubleshooting time.

WORKING ALWAYS IN PERFECT CONDITIONS

Maestro Connect can provide a full kit of sophisticated sensor devices to detect and warn the operator in case of alarming conditions of the machine.

DIGITAL SERVICES

SMART MAINTENANCE: DOWN TIME REDUCTION

- Maestro connect reduces maintenance downtime thanks to:
- automatic maintenance notifications and scheduling, to prevent failures and work in the best conditions of use
 - direct connection to SCM Service thanks to an automatic ticket opening function

SMART MACHINE: ANYTIME, ANYWHERE AWARENESS

Connecting your SCM machine also means having your machine always at hand. Immediate instant notifications in case of alarms or downtimes allow customers to immediately take an action thus optimizing his productivity.

SMART MANAGEMENT: PRODUCTION PERFORMANCE OPTIMIZATION

Reports and KPIs allow further analysis thus increasing Customer Knowledge about his performance and results.

SMART PARTS: FAST PARTS REPLENISHMENT

Repairs are scheduled proactively since the system provides Spare Parts suggestions and a direct Integration with Smart Parts e-shop.

SMART LEARNING: EXECUTE WORK AND RECEIVE PROBLEM SOLVING SUPPORT

Maestro connect provides an intuitive Problem Solving Management System to help the operator to self solve any issue.

SMARTTECH: FASTER AUGMENTED SUPPORT

Maestro connect allows augmented reality support by means of Smarttech: the head-wearable computers with wireless connectivity that will bring the interaction between customer and SCM service to a higher level.

SMART WARRANTY: YOUR MACHINE ALWAYS IN PERFECT CONDITIONS

Together with scheduled maintenance contracts, you can take care of your asset by doubling the warranty from 1 year to 2 years* for complete peace of mind!
*please read the complete contract to understand terms and conditions.

A WORLD OF SERVICES FOR GREATER EFFICIENCY

TECHNICAL DATA

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CNC drilling centres

		cx210	cx220
AXES			
Panel length min./max.	mm	200 / 3050	
Panel width min./max.	mm	50 / 1300	
Panel thickness min./max.	mm	8 / 95	
Panel weight max.	kg	70	
Max. axes X - Y – Z speed	m/min	70 - 40 - 30	
F31LTC DRILLING HEAD			
Vertical spindles	no.	21	
Horizontal spindles	no.	10 (6X+4Y)	
Rotation speed	rpm	4200 (up to 8000 with inverter)	
Integrated saw-blade in X	Ø	125	
	rpm	5000 (up to 10.000 with inverter)	
F21L DRILLING HEAD			
Vertical spindles	no.	-	13
Horizontal spindles	no.	-	8 (6X+2Y)
Rotation speed	rpm	-	4200 (up to 8000 with inverter)
Integrated saw-blade in X	Ø		125
	rpm	-	5000 (up to 10.000 with inverter)
ROUTING UNIT (opt.)			
Motor power	kW (hp)	7,5 (10,2)	
Rotation speed (up to)	rpm	24000	
Available tools on tool changer	positions	6	
SAW-BLADE/CLAMEX 0°-90° (opt.)			
Motor power (up to)	kW (hp)	2,2 (3)	
Rotation speed (up to)	rpm	5500	
Diameter (up to)	mm	125	
Dowel insertion devices	no.	1 right+1 left	2 right+2 left



THE USE OF POWER ONLY WHEN IT IS REQUIRED

SavEnergy allows making things operate only when they are really necessary. It means the machine automatically enters "stand-by" mode when there are no panels to be machined.

COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =

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.

Maximum noise levels measured according to the operating conditions established by EN 848-3:2012
Acoustic pressure in process (routing) 81 dbA (measured according to EN ISO 11202:2010, uncertainty K = 4 dB)
Acoustic power in process (routing) 98 dbA measured according to EN ISO 3746:2010, uncertainty K = 4 dB)

Even if there is a correlation between above mentioned "conventional" noise emission values and average levels of personal exposure over eight hours of operators, these last also depend on the real operating conditions, duration of exposure, acoustic conditions of the working environment and presence of further noise sources, this means the number of machines and other adjacent processes.

PROMPT AND EXPERT TECHNICAL SUPPORT THROUGH A NETWORK OF 1000 TECHNICIANS AND AN INVENTORY OF 36,000 SPARE PARTS.

HIGHLY SPECIALISED TECHNICIANS, EFFICIENT MANAGEMENT AND 6 SPARE PARTS BRANCHES AROUND THE WORLD GUARANTEE A CLOSE, SAFE AND EFFECTIVE TECHNICAL SUPPORT.

SERVICE

SCM provides a service that goes beyond the purchase, to guarantee the long term performance of your technological production system and peace of mind for your business.

A COMPLETE RANGE OF AFTER-SALES SERVICES

- installation and start-up of machines, cells, lines and systems
- tailored training programs
- telephone support to reduce times and costs when machines are not working
- preventive maintenance programs to guarantee long term performance
- complete renovation of machines and plants to renew the added value of the investments
- custom upgrading to update machines and plants and meet new production requirements

SPARE PARTS

SCM Group can count on 140 spare parts professionals worldwide to meet any request with real time shipments.



36,000 SPARE PARTS

Our spare parts inventory, with a value of 12 million euros, covers every single machine



SPARE PARTS GUARANTEED

We guarantee also hard to find parts, with 3,5 million euros invested in "critical" spare parts.



IMMEDIATE AVAILABILITY

Over 90% of orders received are carried out the same day thanks to the huge inventory available.



6 BRANCHES AROUND THE WORLD

The spare parts service can count on worldwide support (Rimini, Singapore, Shenzhen, Moscow, Atlanta, São Bento do Sul)



500 SHIPMENTS A DAY

THE STRONGEST WOOD TECHNOLOGIES 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

20.000 machines manufactured per year

90% export

20 foreign branches

400 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 equipment and components for machining the widest range of materials.

SCM GROUP, A HIGHLY SKILLED TEAM EXPERT IN INDUSTRIAL MACHINES AND COMPONENTS

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

INDUSTRIAL COMPONENTS

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



SPINDLES AND
TECHNOLOGICAL
COMPONENTS



ELECTRIC PANELS



METALWORK



CAST IRON



is more



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