

morbidelli ux

CNC drilling centres



DRILLING TOP POWER



MORBIDELLI UX



THE WINNING
FORMULA FOR YOUR
PRODUCTION POTENTIAL

MORBIDELLI UX

COMPLETE



The optimal solution for batch 1 process: drilling, routing, grooving, doweling on a single machine.

All possible combinations: complete to meet any need.

TOP QUALITY



Doubled productivity thanks to the new drilling heads able to simultaneously process on two overlapping panels.

Increasingly faster cycles thanks to the 2 pairs of dowel insertion devices at an equal distance apart.

Reduced maintenance, thanks to the RO.AX (Rotoaxial spindle technology) drilling bits. It is recommended only after more than 1,000 hours of machining.

FLEXIBLE



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

Extreme flexibility: double router motor (upper and lower) with 6+6 positions dual tool changer.

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

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

PRECISE



No vibrations and best finishing quality: caged "O-frame" electro-welded structure.

No scratching thanks to the new work table made of special rollers in a scratch-resistant material. Also capable of processing lacquered and delicate panels.

No mistakes thanks to the precise measuring devices involved in pre-production process.

MODULAR



Incrementally timed machining cycles thanks to the pre-loading station.

Full machine integration with automatic loading/unloading or incorporated into automatic lines.

DIGITAL



CAD/CAM programming software to design all the production process.
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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CNC drilling centres



- **Doubled productivity** thanks to the new drilling heads able to process simultaneously on two overlapping panels.
- **Reduced maintenance**, thanks to the **RO.AX** (Rotoaxial spindle technology) drilling bits. It is recommended only after more than 1,000 hours of machining.



- **Increasingly faster complete cycles** thanks to 2 pairs of dowel insertion devices at an equal distance apart on the upper drilling head.



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

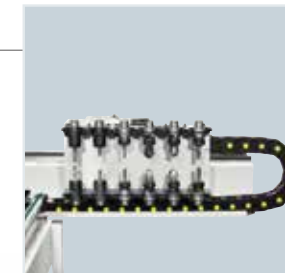


The two guides and the **brushless motors**, combined with the rack and pinion mechanism, offer **rigid movement together with a precise and quick positioning**.

Non-stop machining cycles with the **pre-loading station**.

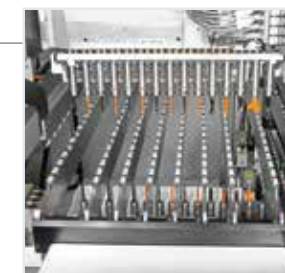
Integrated electrical cabinet with air conditioner.

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 a 21.5" screen size.



Full routing capability: 6+6 positions dual tool changer to always have any tool available on both drilling heads.

Non-stop processing thanks to the **unloading buffer** that allows the machine to operate without interruptions.



No scratching thanks to the **work table** made of special rollers in a scratch-resistant material, capable of processing lacquered and delicate panels.





DRILLING UNIT

Doubled productivity and high-quality drilling on 6 faces of the panel: the dual drilling heads are able to simultaneously process on two overlapping panels.

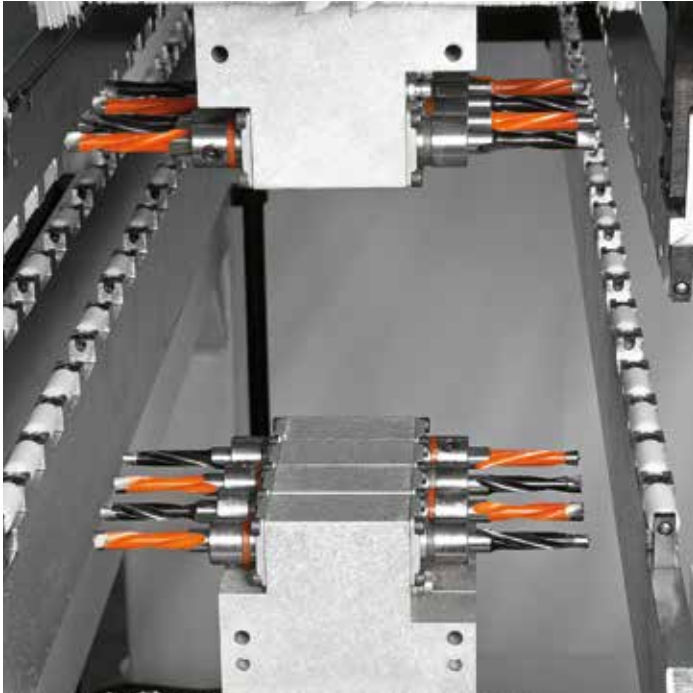


Drilling heads with the latest generation of **RO.AX** (Rotoaxial spindle technology) spindles: up to 136 independent spindles.



HINGE DRILLING: THE THREE IN ONE SOLUTION!

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



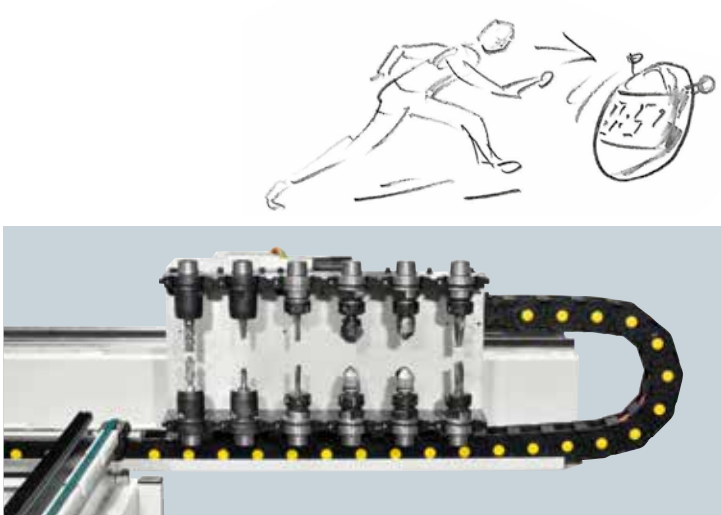
HORIZONTAL DRILLING:

- Up to 8+8 independent spindles along X –axis with adjustable center-to-center distance
- 2+2 independent spindles along Y-axis
- 2 independent spindles on the upper head at the clamping side
- Integrated saw-blades for grooves along X –axis

OPERATING UNITS TO MATCH ANY PRODUCTION REQUIREMENT



**EXTREME FLEXIBILITY:
DOUBLE ROUTER MOTOR WITH DUAL TOOL CHANGER**
Two 9.5 kW electrospindles to execute all routing operations and dual tool changer to have all the tools loaded, always available on both heads, **reducing cycle time by 70%.**

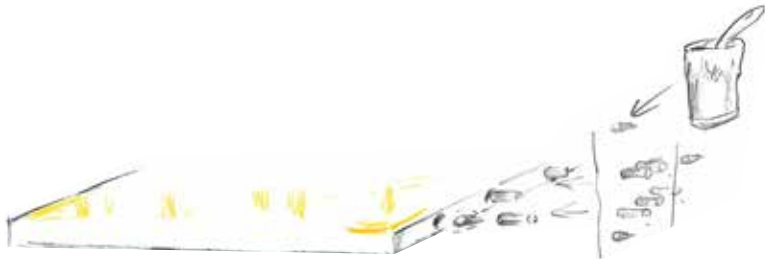


**EVEN HIGHER PERFORMANCE:
DOWELING UNIT**
Increasingly faster cycles thanks to the 2 pairs of doweling units with equal distance apart on the upper drilling head and 16 horizontal spindles on the lower head.



Tilting unit 0°/90° with dedicated grooving tool to process grooving in both directions or **"Clamex" connections.**

Continuous dowel feeding with the help of the electromechanical vibrating unit. This unit can be equipped with the high pressure vinyl glue feeding circuit or the water feeding circuit for pre-glued dowels.



Feeding circuit for pre-glued dowels



Vinyl glue feeding circuit and high pressure pump for injection feeding and cleaning

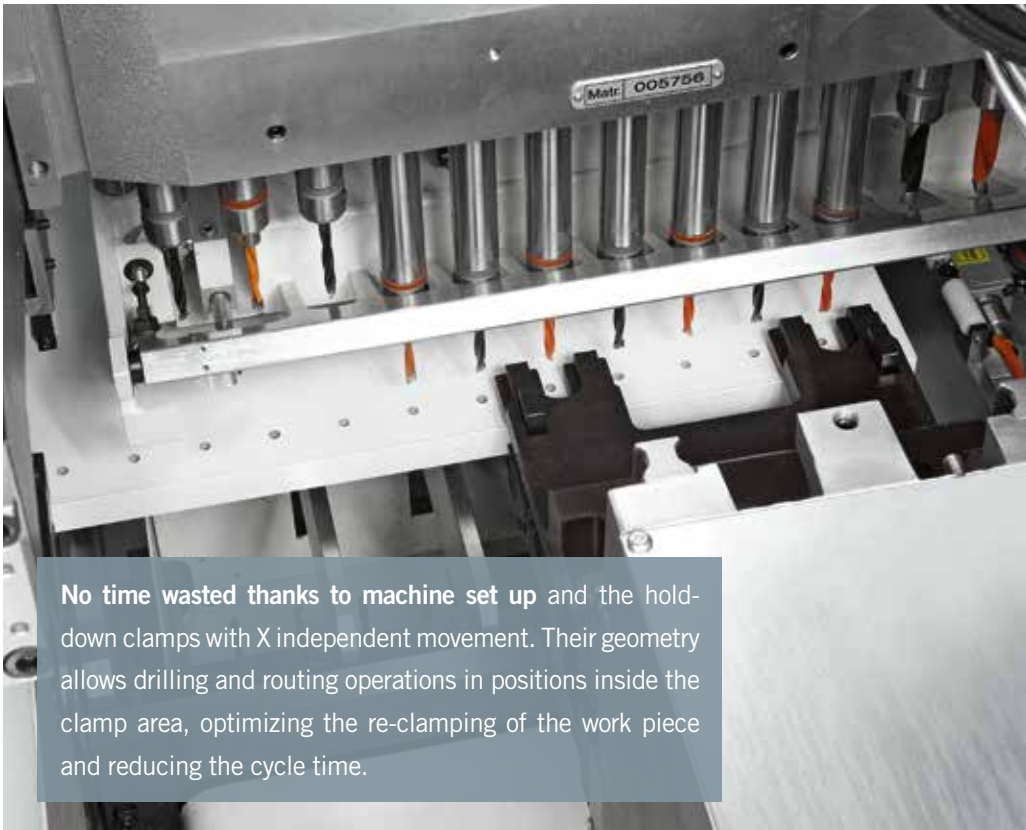


WORK TABLE

The work table is designed to perform all machining operations in the spaces between the supports. It is made of special rollers in a scratch-resistant material, guaranteeing the **careful movements of the panels** ensures that the panel surfaces are not scratched. The best solution for lacquered and delicate panels.



PERFECTLY LEVELED
Perfect panel adherence during the machining thanks to pressing units.



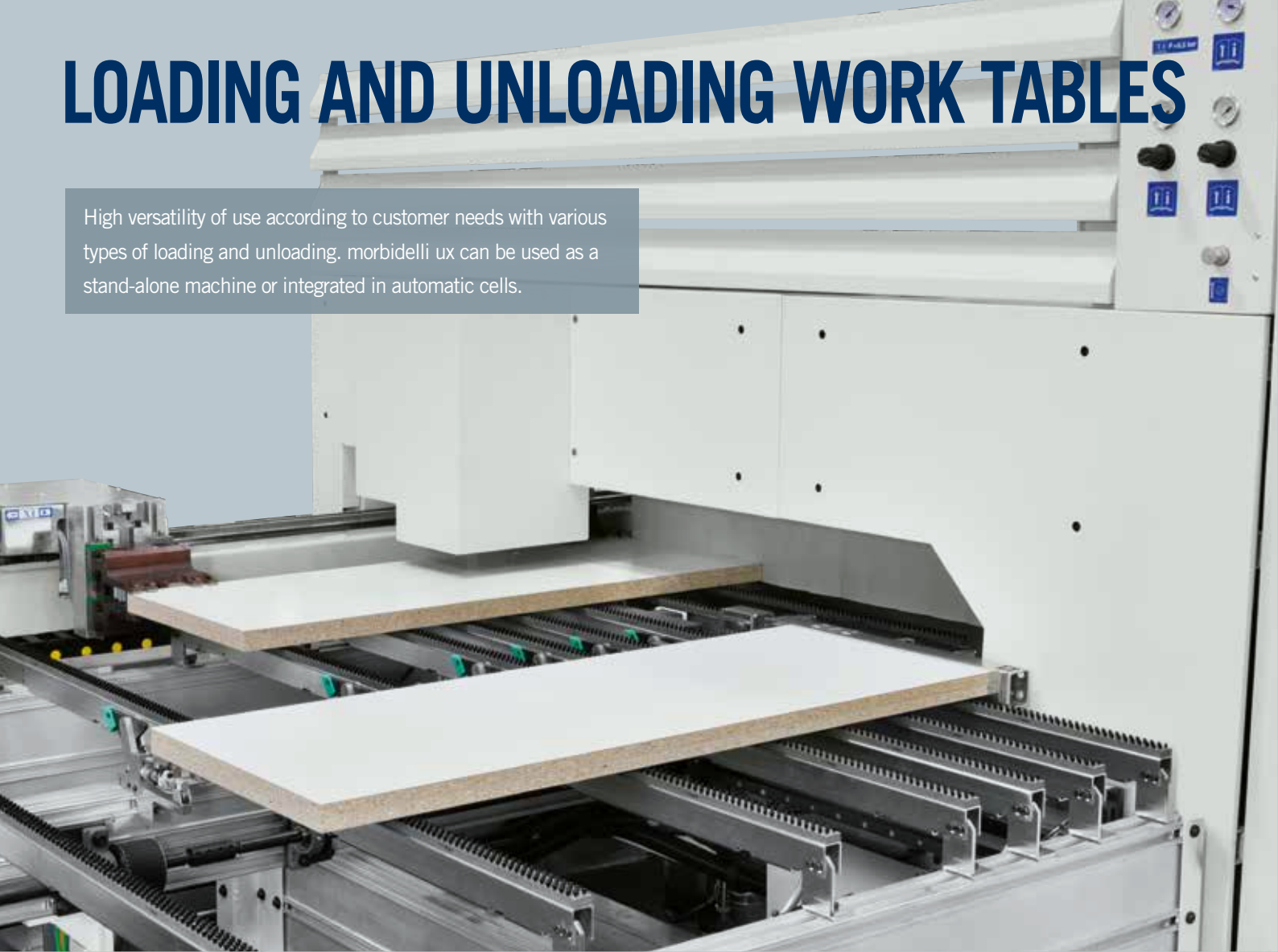
No time wasted thanks to machine set up and the hold-down clamps with X independent movement. Their geometry allows drilling and routing operations in positions inside the clamp area, optimizing the re-clamping of the work piece and reducing the cycle time.



Two guides and the brushless motors, combined with the rack and pinion mechanism, offer a precise and quick positioning.

LOADING AND UNLOADING WORK TABLES

High versatility of use according to customer needs with various types of loading and unloading. morbidelli ux can be used as a stand-alone machine or integrated in automatic cells.



No loading time thanks to the **pre-loading station**.



*Everything under control:
no mistakes thanks to the
measuring system of the
panel before processing.*



FLOTEX WORK TABLE

For an easy and ergonomic loading.
Ergonomically designed loading table in reference to the clamps and side stop.



No downtime during machining cycles thanks to the unloading table complete with the **unloading buffer** with crosswise belts.

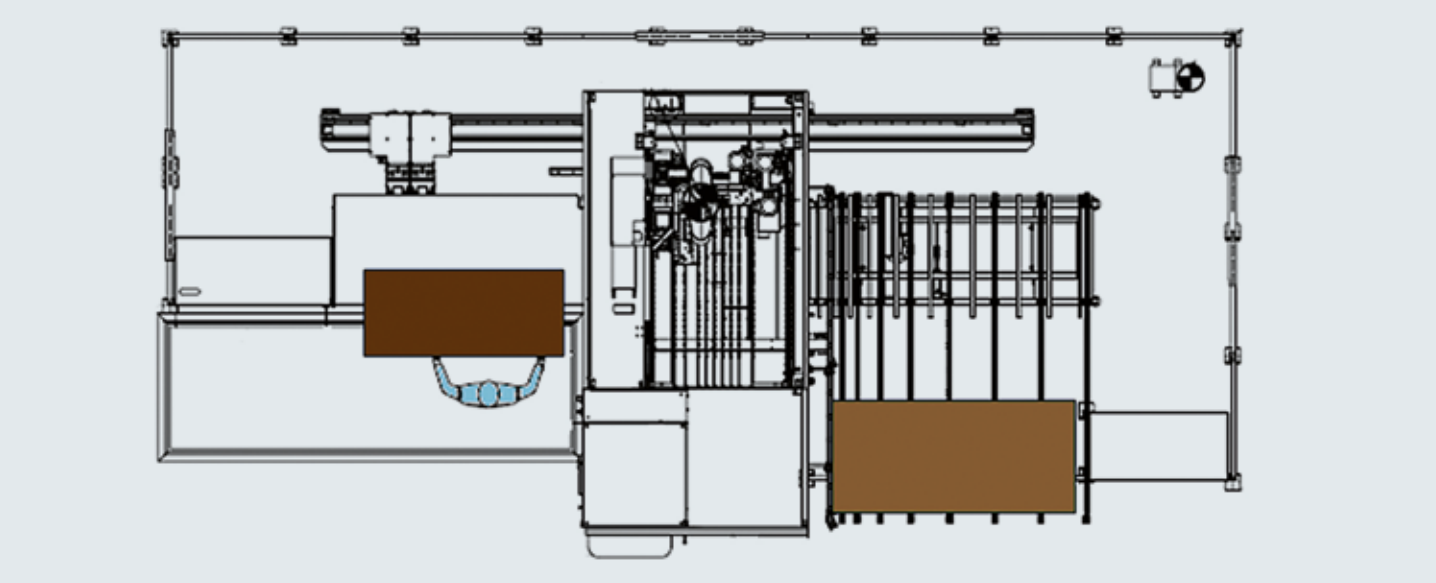
INTEGRABILITY AND OVERALL DIMENSIONS

...A SOLUTION FOR ALL

Dedicated devices for manual or automatic loading and unloading of panels, to match any requirement in production processes.

EASY AND SMART

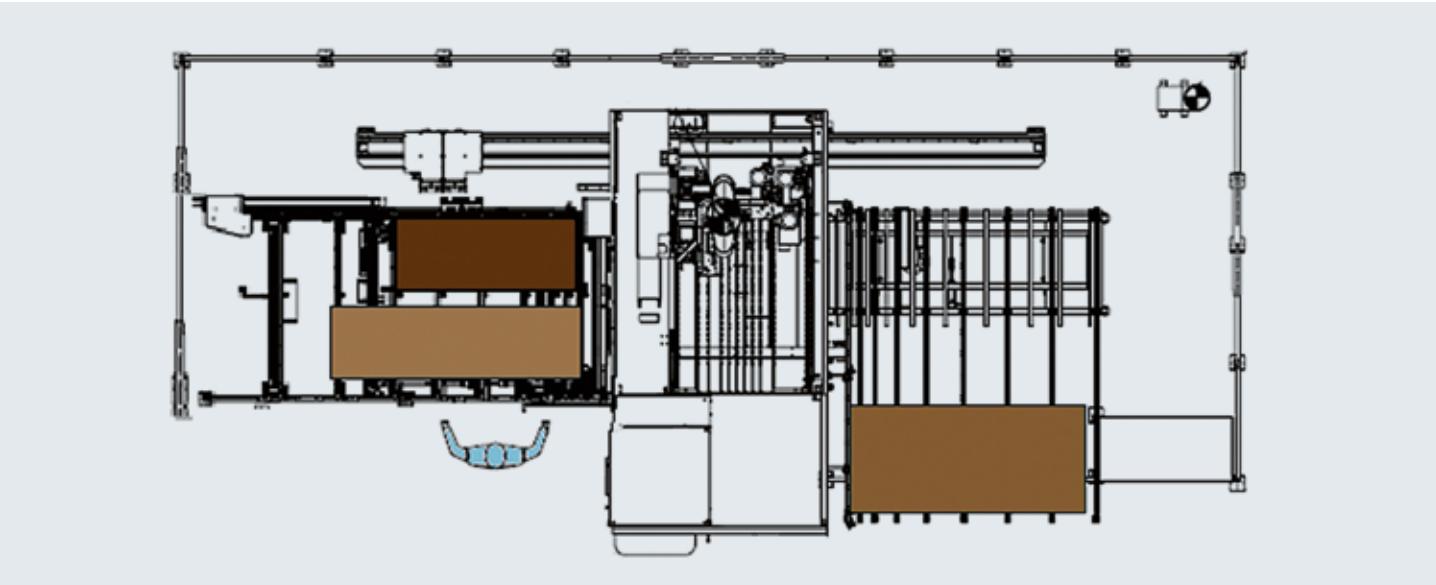
Manual loading and unloading: loading table in FLOTEX material and unloading buffer with belt.



	LENGTH	WIDTH	HEIGHT
mm	8490	3900	2750

NO LOADING TIME

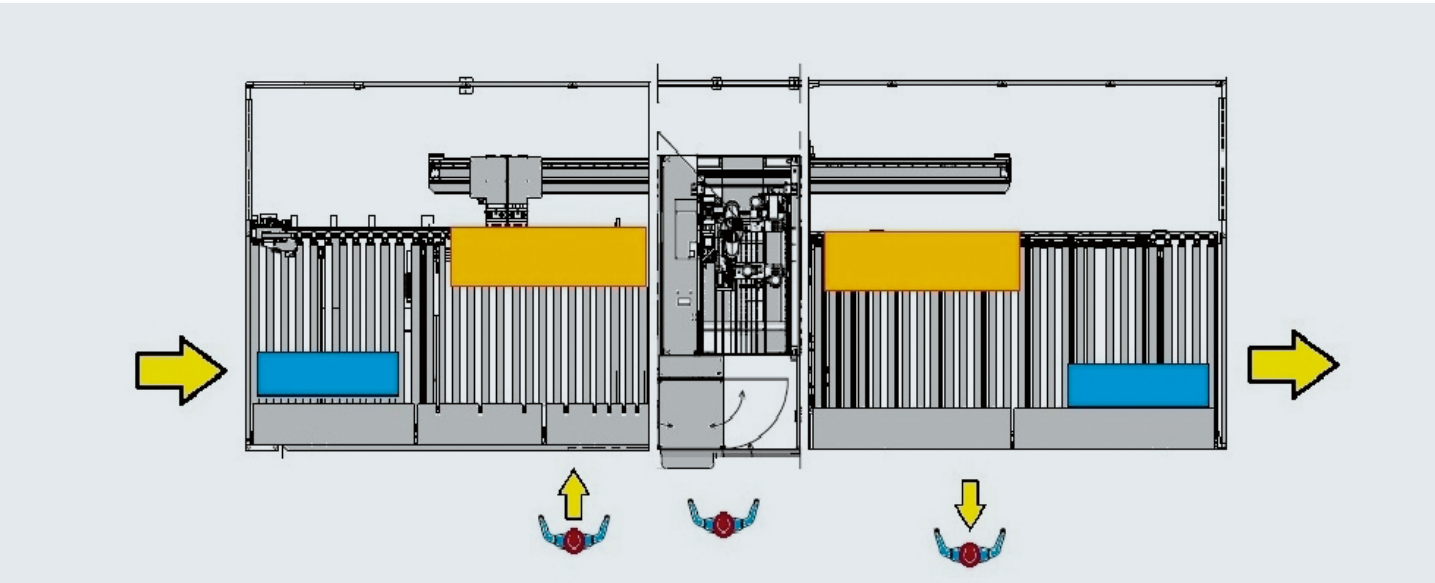
Double loading station and manual unloading: loading table with crosswise belts with pre-loading station and unloading buffer.



	LENGTH	WIDTH	HEIGHT
mm	9050	3900	2750

INTEGRATION INTO PROCESSING LINES

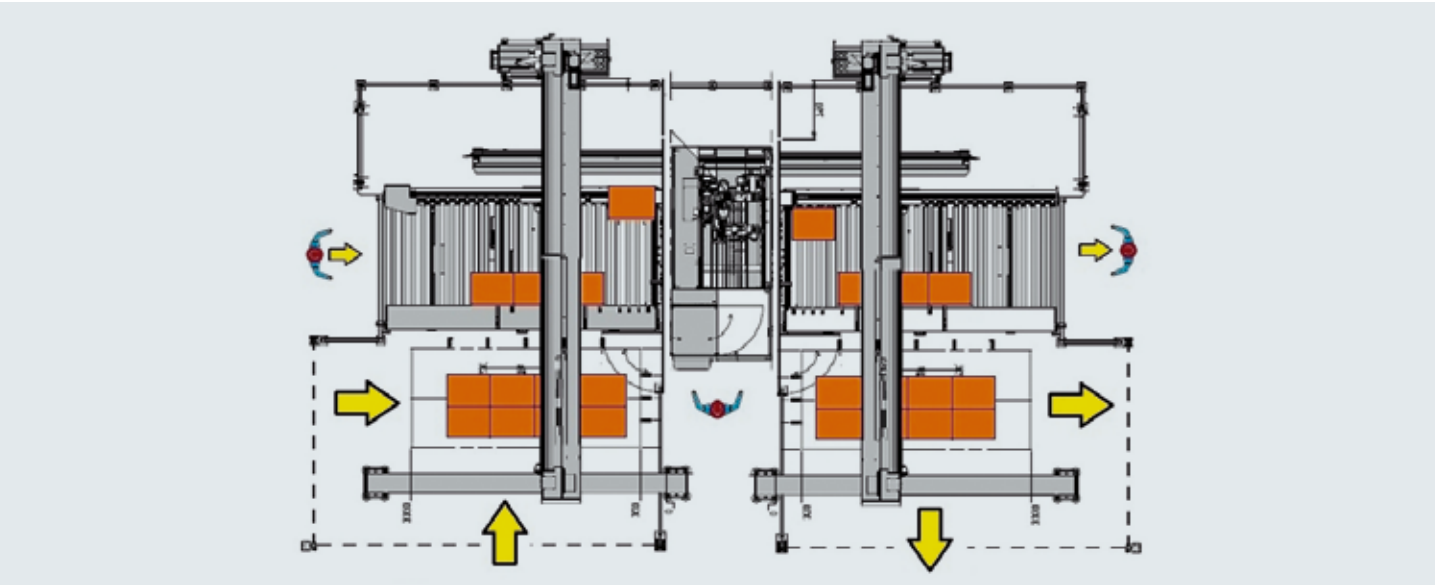
Lengthwise loading and unloading station with automated rollers with the possibility to use the machine with manual loading and unloading.



	LENGTH	WIDTH	HEIGHT
mm	9120	4050	2750

CELL VERSION

Automated cell with 3-axis gantry loading/unloading devices properly designed to manage panels in stacks.



	LENGTH	WIDTH	HEIGHT
mm	11340	6900	4680

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.

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

8
Asset management
with e-shop SCM
Spare Parts

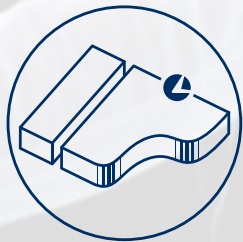
Maestro connect
IoT Platform





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.

A WORLD OF SERVICES FOR GREATER EFFICIENCY

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.*

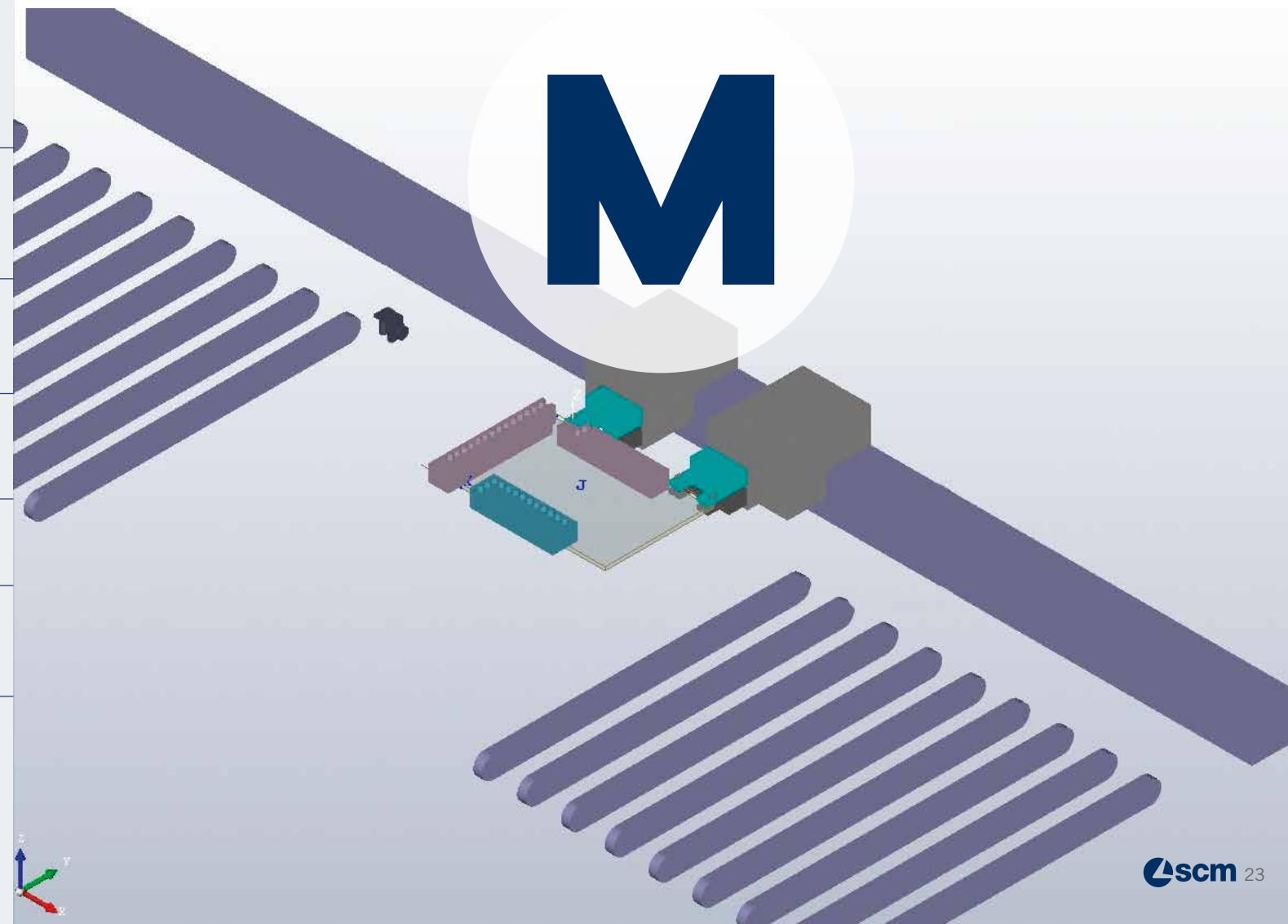
EYE-M

morbidelli ux

CNC drilling centres



All the machine functions can be managed with a simple touch, thanks to the industrial PC with full HD multi-touch color display with a 21.5" screen size.



TECHNICAL DATA

morbidelli ux100/ux200/ux200d		
AXES		
Min. / max. panel length	mm	250 / 3200
Min. / max. panel length without panel recovering	mm	250 / 1950
Min. / max. panel width	mm	70 / 1300
Min. / max. single panel thickness	mm	10 / 80
Min. / max. overlapped panels thickness	mm	5(x2) / 35(x2)
Max. panel weight	kg	100
Work table height	mm	960
Z stroke - upper drilling head	mm	145
Z stroke - lower drilling head	mm	90
Max. speed X - Y - Z axes	m/min	120 - 45 - 30
DRILLING UNIT		
Vertical spindles		
ux100	no.	31+31
ux200/ux200d		48 + 48
Horizontal spindles (up to)		
ux100/ ux200d	no.	16(X) / 6 (Y)
ux200		32(X) / 6 (Y)
Rotation speed (up to)	rpm	6000
Integrated saw-blade in X (ux100/ux200)	Ø mm	125
	rpm	up to 7500
Dowels inserting devices with variable centre-to-centre distance (ux200d)	no.	2right + 2left
ROUTING UNIT		
Motor power (S6)	kW (hp)	9,5 (13)
Rotation speed (up to)	rpm	24000
Tool changer	positions	6 + 6



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

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.

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



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