CNC - machining centres

morbidelli p800

machining centre for drilling, routing and edgebanding



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scm
woodworking technology

morbidelli p800

machining centre for drilling, routing and edgebanding

You can customise your **morbidelli p800** to create an even better working experience. All accessories are designed to increase productivity and to be as easy as possible to use in all conditions.

- **ZERO SET-UP TIME**
  when switching from one machining operation to the next with the NC worktable featuring a workpiece **automatic separation** software function. This means that you can machine **more panels with a single loading operation**, ideal for incre sing productivity.
- **ZERO DEFECTS**
  with maximum absolute quality even for joins on “difficult” workpieces. The new **Sbrindle** device reads the position of the edging “on-the-fly”.
- **ZERO DIFFICULTY**
  programming, even for less experienced operators, using **Maestro edge** the brand new software with which a single platform is used to carry out all types of machining.

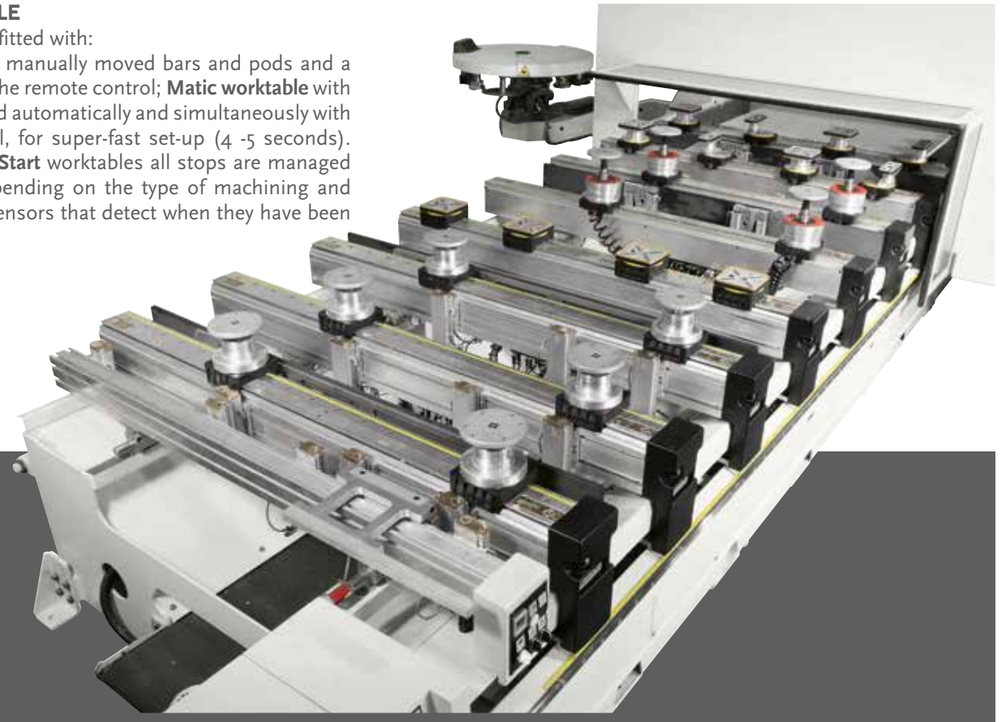




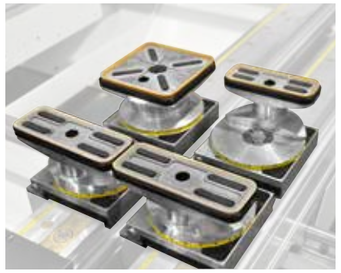
morbidelli p800

zero set-up time between one machining operation and the next

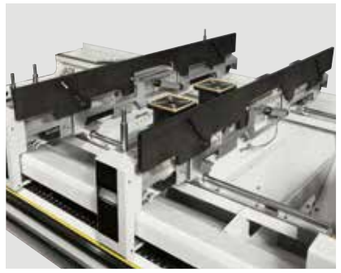
LARGE WORKTABLE
the machine can be fitted with:
Start worktable with manually moved bars and pods and a display function on the remote control; **Matic worktable** with bars and pods moved automatically and simultaneously with anti-collision control, for super-fast set-up (4 -5 seconds). On both **Matic** and **Start** worktables all stops are managed by the program depending on the type of machining and are equipped with sensors that detect when they have been excluded.



Wide choice of equipment for machining with mechanical hold-downs. Pods can easily be removed from the supports, leaving the operator great freedom to adapt the machining area to the shape of the panel. Workpiece hold-down is guaranteed not just by a vacuum, but also by pod mechanical locking.



A vast range of pods guarantees the best solution for perfect panel locking.





Loading aid devices fitted with sensors and with pneumatic lifting make heavy panel positioning on the worktable easy.

maximum product and factory **cleanness**



Collecting belt for carrying away machining waste and shavings.



Shavings conveyor plate, for optimum cleanness in the machining area.



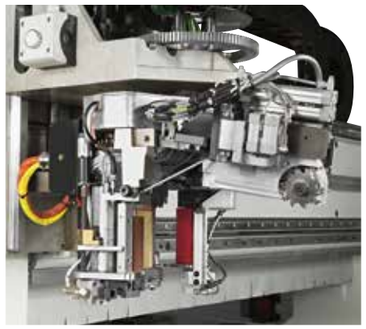
Optimised centralised suction reduces consumption and maximises performance.

morbidelli p800

zero defects from production, with absolute quality even for joins on “difficult” workpieces



The new edge banding unit with glue application **directly on the edging reduces the number of mechanical parts** needed to build it with a consequent increase in:
• flexible use on complex profiles thanks to the reduced overall dimensions
• total reliability of the gluing process because it is simpler.



A higher performance edge banding unit that allows the application of edging **up to 84 mm high for panels up to 80 mm thick**. The new SBRINDLE device can detect the position of the start of the edging on-the-fly”, allowing 0/360° joins on minimum stretches.



Optimises the cycle time in edge banding operations with 0-360° join. The join can be made on stretches with constant geometry having a minimum length of 80 mm.



The **numerically controlled Z axis** allows adjustment of the lower projection of the edging relative to the worktable, for example for using dust seal edging.

The edging magazine can hold **from 2 to 12 different types of edging so that it can always make available the one best suited to the machining set**. Selection, feeding and supply speed are managed by the numeric control.



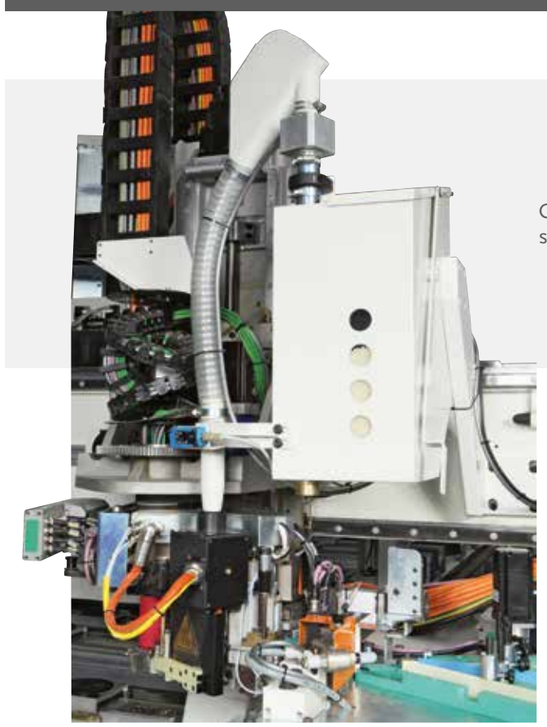
maximum hold from gluing

Automatic adjustment of the edging vertical limiters allows maximum machining flexibility, working in rapid succession on panels with different thicknesses, particularly effective for batch 1 production.





The quick change glue tank has a unique design with a spreading roller featuring a built-in heating element to guarantee uniform gluing and lasting adhesive chemical properties for the best possible product performance.
Fast change-overs allow preventive maintenance or a change of glue (colour or type), slashing down times.



Glue is loaded in masked times into the granule feed system fixed to the gluing unit.

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zero finishing problems with powerful routing units



The high-tech **5-axis machining unit** with 17 kW (S6) power rating can machine workpieces with complex geometric shapes, guaranteeing quality and precision.
C axis, continuous 0/360° and pneumatic devices for edging finishing heads.



The **4-axis machining unit** with 11 and 15 kW (S6) power ratings, mounted on a carriage independent from the drilling unit, can perform all vertical routing functions using edging finishing heads. C axis continuous 0/360° and pneumatic devices for edging finishing heads.

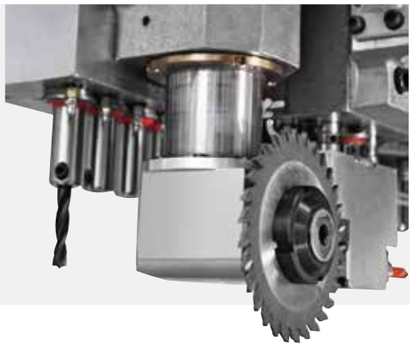


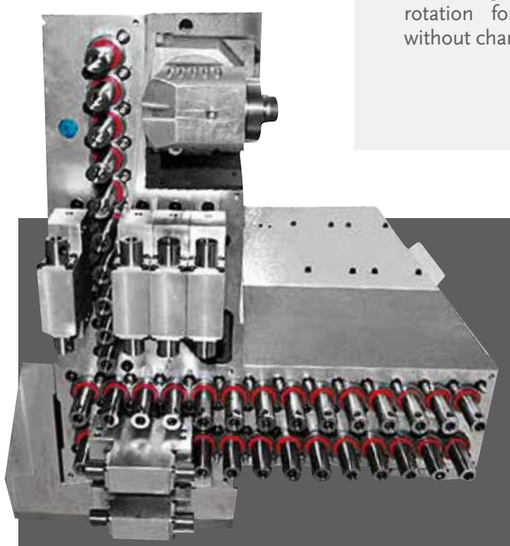


Tool substitution is automatic and takes place in masked times, while the edgebanding unit is operating.
This is possible thanks to the **10 and 18 positions tool changers** installed directly on the machine.

flexibility and possibility of configuring the machine with different drilling units

Blade unit integrated with the drilling head, with 0-90° rotation for back cutting without changing tool.





Possibility of configuring the machine with different drilling units with independent spindles, for a drilling capacity that meets your requirements.
The latest-generation ultra-rigid drilling heads with RO.AX (Rotoaxial spindle technology) can be installed. They operate at 8000 rpm, with from 26 spindles up to a powerful head with 50 independent spindles. For heavy duty drilling (sides of wardrobes, soundproofing panels, etc.) or for very diverse bit types and diameters.



3-axis electro-spindle, excellent for shaping panels or for anti-splinter machining on panels already edged, **avoiding a tool change on the main motor.**



Blade unit with 0-360° independent rotation, ideal for panel sizing or **edging end trimming on-the-fly.**

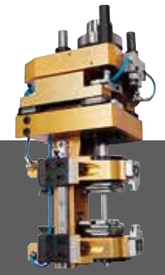


PB1
3-axis electro-spindle with 6 location on-board tool changer. The definitive solution for the most diverse machining operations, guaranteeing **machining continuity** alternating with the main motor.

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operating units

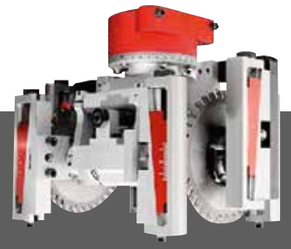
Finishing heads and aggregates



Multifunction trimmer + edge scraper unit



Blade unit for edging end trimming



Rounding end trimming unit



Head for cleaning 90° internal angles (doors, kitchen tops, etc.)



Head for postformed panels

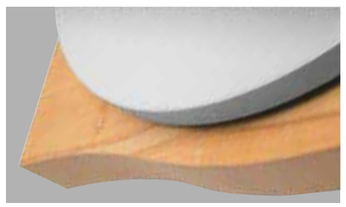


Head for routing on lower face

Edge trimming processing on wooden edge









Edging trimming



Edge scraping

zero risks for the operator who can always work in complete safety

Pressure mats let the machine operate at a constant top speed and guarantee total operator safety.



Overlapping layers of side safety slats protect the machining unit, able to move for completely safe top speed machining.





Maximum machining visibility.



The **remote console** gives the operator direct, immediate control.

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 edgebanding

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

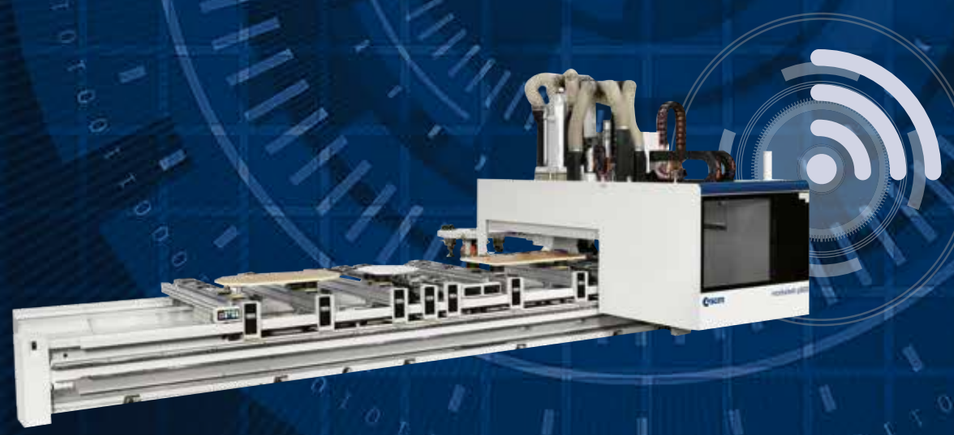
smart, with algorithms and computing modules aiming at the best possible result

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
8. 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 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 pro view - **Unique 3D display**
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.

Maestro 3d - **Unique in the creation of 3D objects**
The module integrated in the Maestro suite is designed to program three dimensional objects on 5-axis machining centres.

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 edge - **Unique in edgebanding shaped pieces**
It allows users to manage the routing, drilling and treatment of the edges of shaped panels and components.

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 label - **Unique labeling process**
Integrated module to manage label's models, which develops labels by inserting texts, images, parameters and the main barcode formats.



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 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.

READY TO EDGE!
Simple and immediate display of the edges and rollers tooling process.



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 fastevolving 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..

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

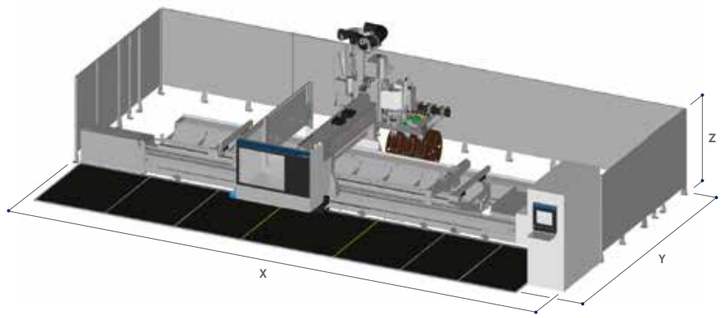
SMART WARRANTY: YOUR MACHINE ALWAYS IN PERFECT CONDITIONS
Together with scheduled maintenance contracts, you can take care of your asset by doubling the warranty from 1 year to 2 years* for complete peace of mind!
please read the complete contract to understand terms and conditions.

TECHNICAL DATA

MORDIBELLI P800		
AXES		
Vectorial speed - X-Y axes	m/min	127
Speed - Z axes	m/min	30
EDGEBANDING UNIT		
Max. thickness to be edgebanded*	mm	80/220
Minimum internal radius for 90° angle **	mm	30
Minimum external radius for 90° angle **	mm	10
Edging storage capacity	no.	8
ROUTING UNIT		
Electrospindle power (up to)	kW	17
Rotation speed (up to)	rpm	24000
Available tools on tool changer (up to)	no.	34
DRILLING UNIT		
Independent vertical spindles (up to)	no.	38
Independent horizontal spindles (up to)	no.	12
Rotation speed (up to)	rpm	8000
0-90° integrated blade, diameter	mm	160
INSTALLATION		
Exhaust air consumption	m^3/h	5700
Exhaust air speed	m/sec	25
Exhaust outlet diameter	mm	250+100

* The maximum thickness that can be machined depends on the thickness of the workpiece, the length of the tool used and the type of edging.
** The internal and external radii depend on the thickness and type of edging.

MORBIDELLI P800 layout



Working area		Dimensions (mm)		
X	Y	X	Y	Z
5020	1680	**11425**	**5045**	**3000**
5020	1905	**11425**	**5275**	**3000**
6360	1680	**12765**	**5045**	**3000**
6360	1905	**12765**	**5275**	**3000**

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.

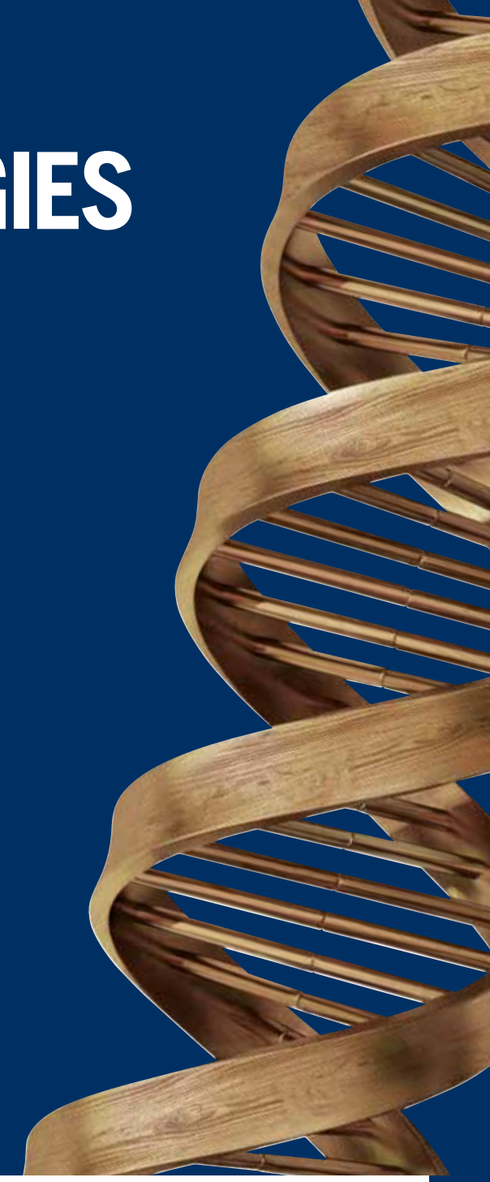
6 BRANCHES AROUND THE WORLD
The spare parts service can count on worldwide support (Rimini, Singapore, Shenzhen, Moscow, Atlanta, São Bento do Sul

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.

- scm — WOODWORKING TECHNOLOGIES
- Cms — 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.

- HITECO — SPINDLES AND TECHNOLOGICAL COMPONENTS
- es — ELECTRIC PANELS
- steelmec — METALWORK
- scmfonderie — CAST IRON

scm woodworking technology | *is more*