

double-end tenoners

# celaschi p60

automatic double-end tenoner



**YOUR VALUE**



# OUR MISSION



A TAILOR MADE  
MACHINE THAT  
ENHANCES YOUR  
PRODUCTS

6

CELASCHI P60

## PRECISION



**An even more robust structure** that, thanks to the total absence of vibrations, ensures the best finish quality.

## RELIABILITY



Entirely **made in Italy**, every machine is designed with the utmost attention to detail, choosing the best suppliers and the best components.

## PRODUCTIVITY



High production rates and machining precision thanks to the workpiece transport system with **feed speed up to 60 m/min**. Celaschi p60 can be equipped with manual loading and unloading system but gives its best in highly performing automated production lines.

## TAILOR MADE SOLUTIONS



It is possible to set up a “tailored” **celaschi p60**, to meet quality standards and performance requirements of one’s own productive reality. Every single machine can be customized in flexibility and productivity without any compromise.

## FLEXIBILITY



**Quick and precise machine set-up** reducing unproductive time and making convenient to manage small batches with frequent machining changes. Such a high level of flexibility guarantees a quick return on investment.

## VERSATILITY



**Ideal for squaring, tenoning, profiling, shaping, on any type of material:** solid wood, panels, non wood materials (PVC, fibre cement, rock wool, heat and acoustic insulating material, gypsum etc.). Every detail of the machine composition is conceived according to workpieces features and dimensions.

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# PRO

# OVERVIEW OF TECHNICAL FEATURES

TECHNOLOGICAL ADVANTAGES

*Unproductive time reduced to a minimum thanks to **Maestro active square** software on **eye-M PRO** console.*



*Precise definition of the material removal with the customizable infeed reference guide; available versions with manual or electronic micro-adjustment.*



*Central support for flexible workpieces; it can be fixed, removable or retractable.*

*Customizable belts at machine infeed and outfeed, according to workpiece overhang during processing.*



*Smooth and precise feeding with the top pressure system customizable according to density, dimensions and profile of the workpieces.*



*Customizable machining height for integration in any line.*

**Silence, cleaning and safety** thanks to the complete protection enclosure with pneumatic opening.



**Efficient chip disposal** with tailor-made extraction hoods for each tool.



Contactless magnetic safety switches keep their **efficacy even in the case of dust accumulation.**

**Possibility of choosing the machine composition** for only lengthwise, only crosswise or double processing.

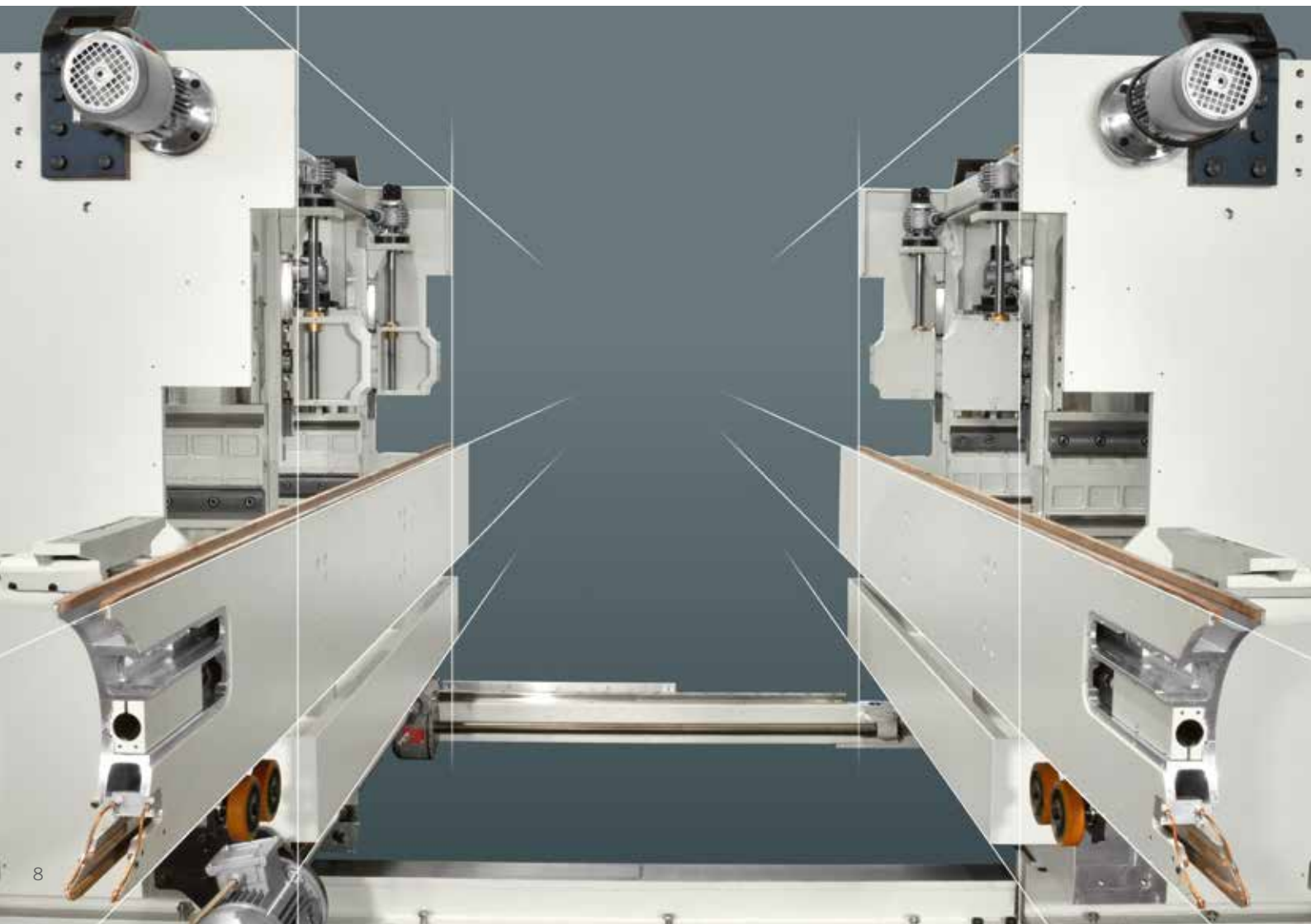


**Mobile beam positioning speed up to 12 m/min** with brushless drive.

# MACHINE BASE

## THE GUARANTEE OF THE BEST RESULT

Powerful and high rigidity structure that guarantees the absorption of the stresses deriving from the most complex and heavy duty operations for an exceptional quality.







A quality control system ensures compliance of the products, in strict compliance with CE regulations.

From flatness and parallelism of the machine base to the final tuning, each machine during the assembly phase is subjected to about 60 intermediate checks.

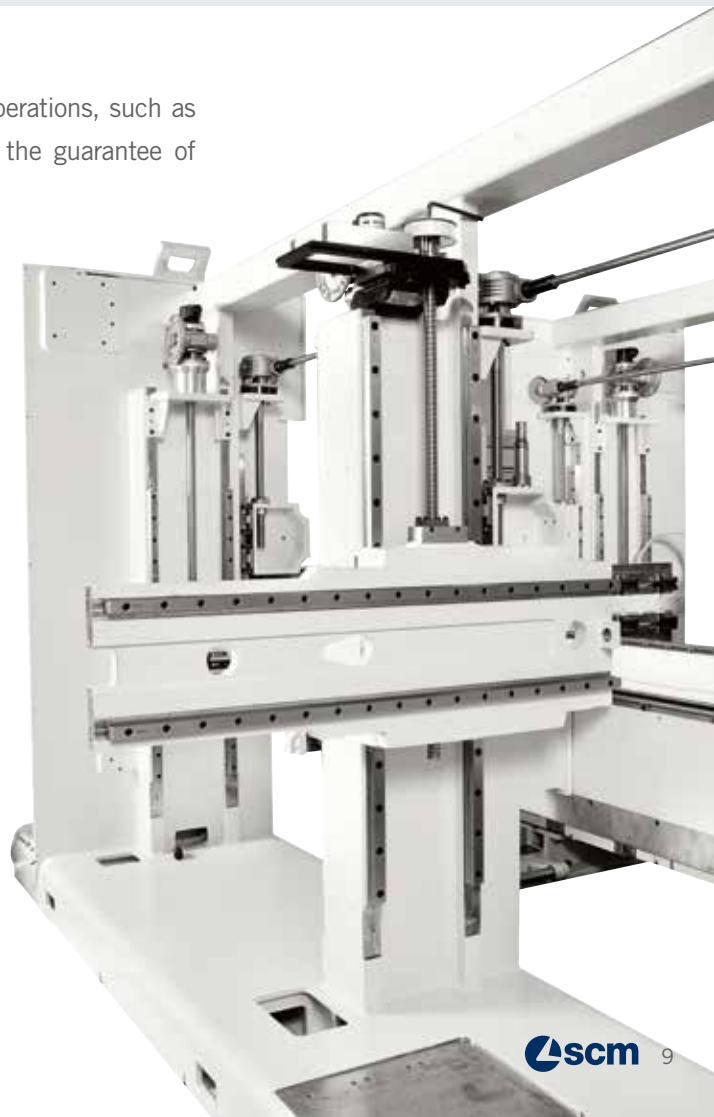


#### **GUARANTEE OF PRECISION AND STABILITY OVER TIME**

The monoblock steel structure gives its best in the most demanding operations, such as multi-shift production, always at maximum performance, always with the guarantee of important and concrete competitive advantages.

#### **MINIMUM FRICTION AND REDUCTION OF MAINTENANCE**

Smooth and precise movement of the mobile beam carried out by means of automatically lubricated trapezoidal screws (from two to four according to the machine length).



# WORKPIECE TRANSPORT SYSTEM

## THE MAIN ELEMENT TO OBTAIN A PRECISE SQUARING

High accuracy even at higher speeds with pinions Z12 and Z13.

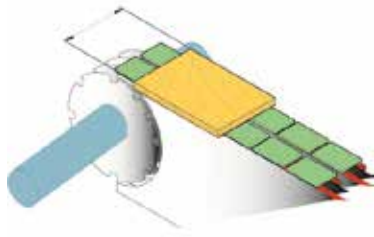


Optimum precision and hold-down with steel and rubber plates for particularly heavy and/or abrasive workpieces.



**WORKPIECE TRANSPORT SYSTEM ALWAYS MORE RELIABLE AND PERFORMING**

Thanks to the chain tracks feeding performed by Gantry axis.



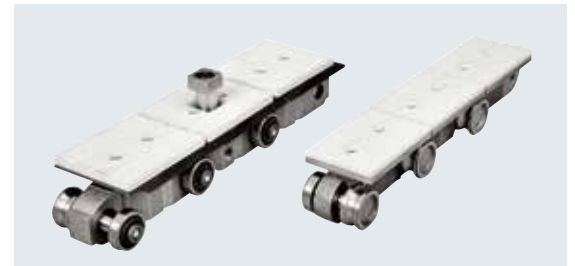
Sliding feed chains 52, 65 or 90 mm wide to process workpieces with minimum width 120, 150 o 210 mm\*

### ALWAYS THE BEST POSSIBLE REFERENCE FOR ANY PRODUCTION RATE

Depending on the type of operation, material, workpiece dimensions and required production rate, it is possible to customize type and pitch of the dogs.



Rolling feed chains 43, 60 or 75 mm wide to process workpieces with minimum width 90, 140 o 170 mm\*



(\*) reference values for a straight profiling operation executed with vertical operating units



### UNIFORM HOLD-DOWN OF THE WORKPIECE DURING THE ENTIRE WORK CYCLE

According to workpiece density, dimensions and profile, it is possible to modify belt type, centre distance and vertical adjustment of the pulleys.

To guarantee a correct workpiece hold-down and to process any profile, it is possible to regulate the pressure system even laterally.

# MONITORING AND CONTROL

Each installable operating unit is aimed to safety, precision and flexibility, thanks to a control system monitoring each parameter and optimizing the production.



## OVERSPEED AND ZEROSPEED FUNCTIONS

The system keeps spindles speed under control and, in the case of exceeding the pre-set limit values, determines the shutdown or prevents an unexpected start in complete safety for the operator.



## ABSORBED POWER DETECTION

The control system monitors the absorption of each operating unit to check its correct working and, if not, acts to signal any anomaly and slow down the workpieces feed, preventing the unit stops abruptly during processing, due to excessive effort.



## VIBRATIONS DETECTION

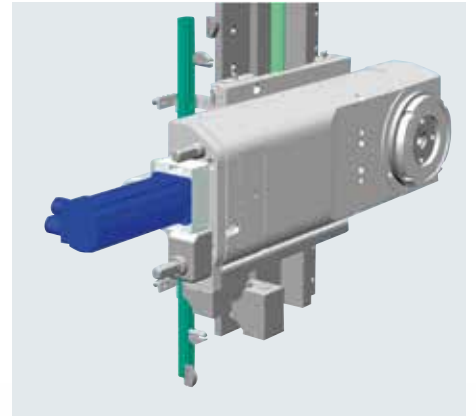
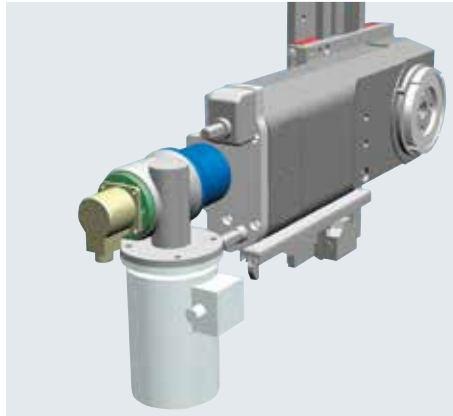
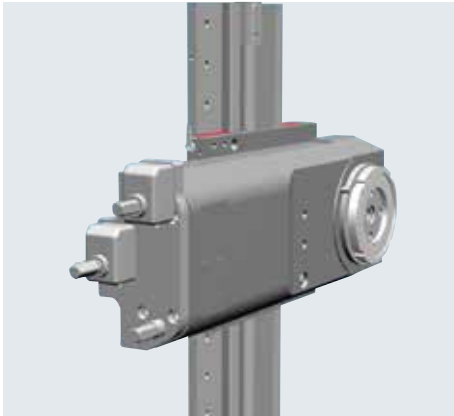
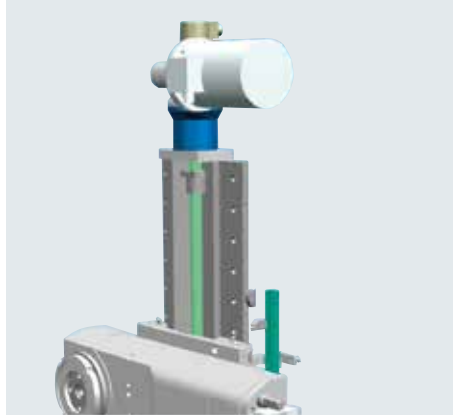
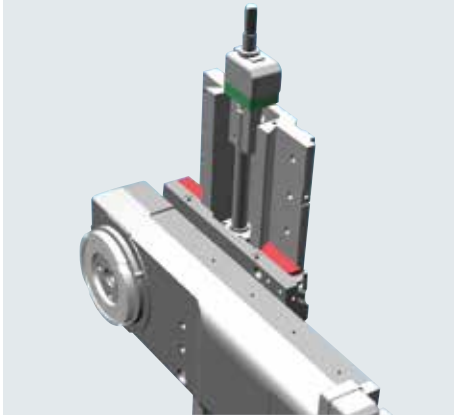
The control system, through the signals received from the specifically installed accelerometers, monitors the state of the electrospindle and points out any unbalance of the tools to prevent that incorrect uses could change the characteristics of duration or a non-optimal tool locking, due to shavings in the coupling areas, could change the geometry.



## MANAGEMENT OF TIMED INTERVENTIONS

The control system monitors workpieces feeding into the machine and controls the automatic entry/exit of the operating units based on the working program.

Brushless axes guarantee the maximum timeliness of intervention of the units and allow to execute side shaping, both throughfeed and stopped grooves with extreme precision, even at high speeds.



Depending on the set-up frequency of the units and the required performance, it is possible to choose between manual or electronic positioning (standard 0.25 m/min or fast 5-7 m/min). The angular positioning, if allowed by the installed aggregates, can be manual or brushless driven.

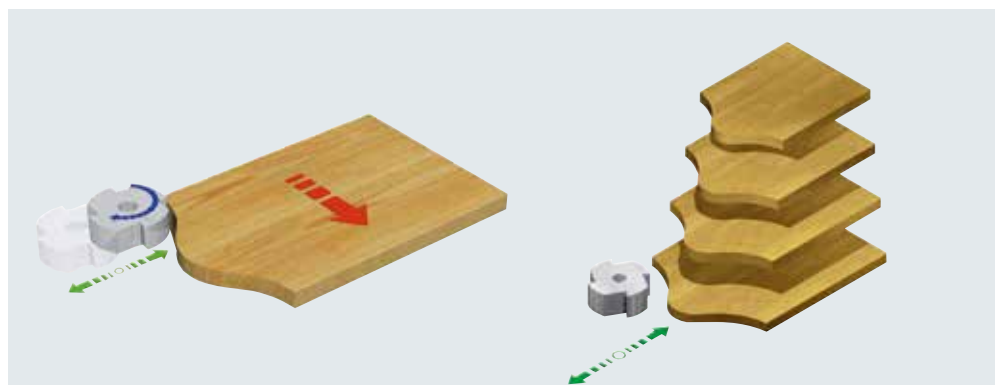


# ADVANCED FUNCTIONS

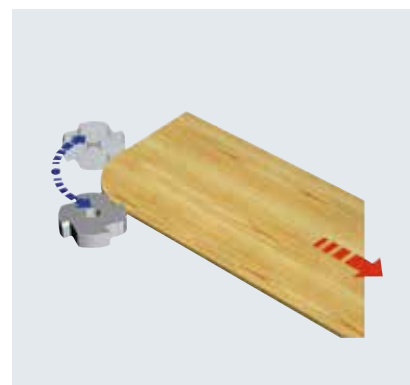
## THE DOUBLE-END TENONER THAT BELIEVES ITSELF A MACHINING CENTRE

With the interpolation of the axes and the on-the-fly units Celaschi p60 becomes a full-fledged machining centre with unparalleled productivity levels.

### SHAPING



### ROUNDING

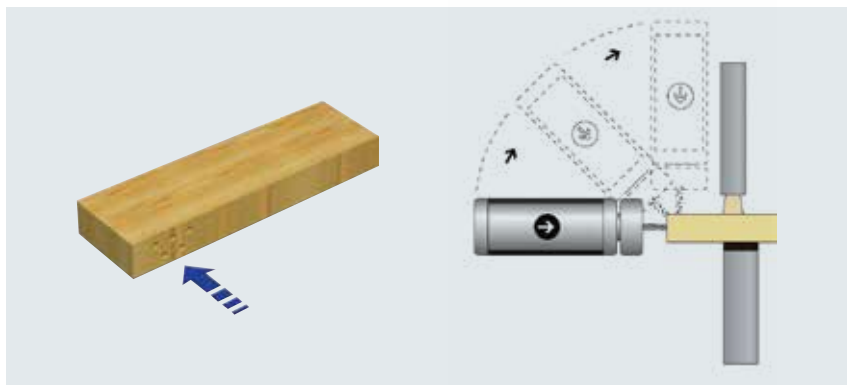


With the same type of profile to be performed, the adjustment of the shape to its length is carried out automatically and in real time, without the need to create a different working program for each size.

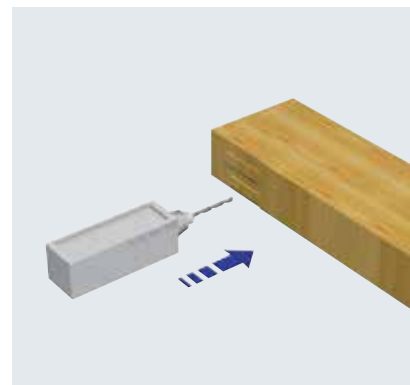
### HIGH PRECISION EXECUTION OF STOPPED GROOVES



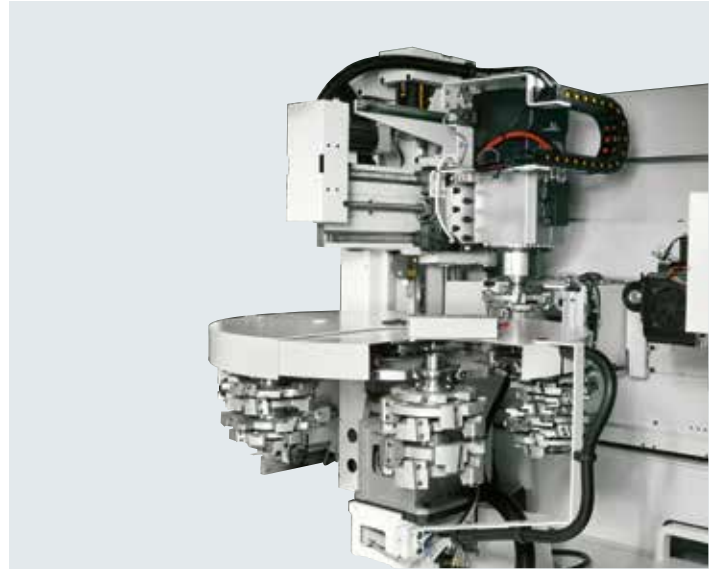
### DRILLING



### "COLIBRI" ANTI-CHIPPING DEVICE



Thanks to a small motor driven on three brushless axes, it is possible to make a small incision on the tenon in correspondence with the subsequent passage of the cutters avoiding any type of chipping. Used for tenoning operations, it allows to eliminate traditional chip-breakers.



#### **RAPID TOOL STORES: TOOLS ALWAYS READY-TO-USE**

Automatic tool stores with up to 12 useful positions, to always have on board the necessary tools for all required profiles. Positioned at a minimum distance from the work area and equipped with a brushless motor, RAPID allows tool change in few seconds.



It is possible to restore the tools present on the RAPID tool store even while the machine is working, zeroing any unproductive time, always in total safety.

# TOOLS WEAR DETECTION

## PRECISION WITH NO EQUAL AT ALL TIMES



### TOOL MANAGEMENT FUNCTION

To allow the operator to be alerted about the imminent need to change a tool, even in the case of more tools provided on the same operating unit.



### CUTTERS WEAR COMPENSATION FUNCTION

To correct the destination quotas of the operating units according to cutters wear.



### WHEELS WEAR COMPENSATION FUNCTION

To change the rotation speed of the electrospindles according to constant diameter wheels wear.







Maximum precision and finish quality during machining of kitchen doors, drawer fronts, solid wood and MDF panels.



# “HEAVY DUTY” EQUIPMENT FOR ABRASIVE MATERIALS PROCESSING



Bellows for protection against abrasive dust applied on moving parts. They prolong life of mechanical parts and significantly reduce maintenance.



Pressurization and rotating brushes for the cleaning of chain tracks.

Ceramic-coated hoods suitably sized for each tool.



Processing of raised floors also with stone or ceramic surfaces.



Machining precision in the profiling of plasterboard and fiber cement panelling even with production rates of 100 m/min.

# FLEXIBLE TECHNOLOGY

## EASY MANAGEMENT OF SMALL BATCHES WITH FREQUENT MACHINING CHANGES



### **“BATCH ONE” MANAGEMENT: FLEXIBILITY AND REDUCTION OF ANY UNPRODUCTIVE TIME BEFORE MACHINE SET-UP**

For panel size variation up to 150 mm, it is possible to change or modify the running program and start a new program without waiting for the machine to empty and without any movement of the mobile beam.

In fact, the various operating units adapt horizontally, by rapid movements, to the size change.

The control system automatically calculates the necessary set up gap and, upon reaching it, signals the load consent.



### **COMPLETE SET-UP IN A FEW SECONDS**

Thanks to the electronic adjustment of mobile beam and operating units by brushless motors, the control system performs a quick and precise setting of the machine minimizing any unproductive time.

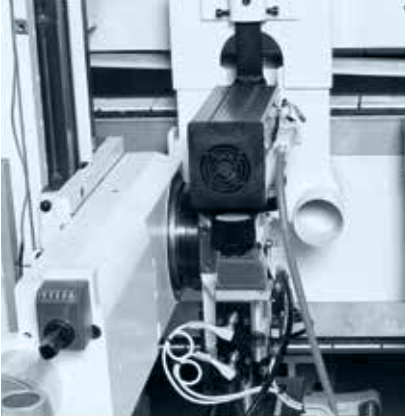


### **HSK TECHNOLOGY: WORK SAFELY IN LESS TIME**

Safe and constant tightness of the locking and pneumatic release system that minimizes unproductive time for tool changes.

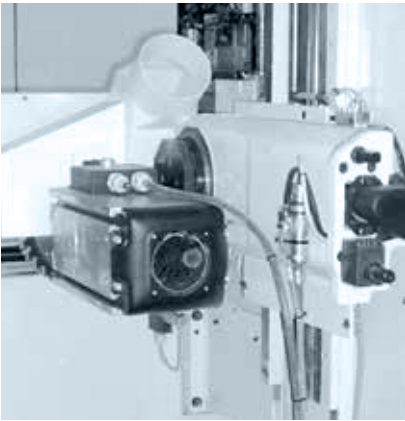


# OPERATING UNITS



## Scoring unit

Equipped with pneumatic or brushless anti-chipping device.  
Power: 3 kW at 6000 rpm  
Tool diameter max: 180 mm



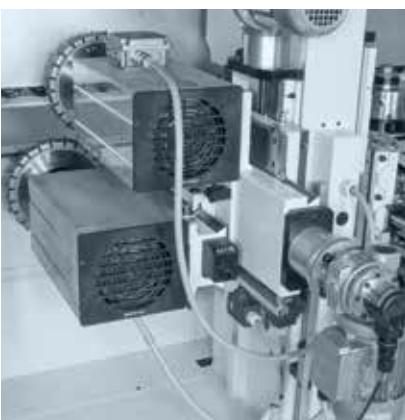
## Hogging unit

Available in different sizes:  
6 - 8,2 - 10,5 - 13,2 - 15 - 18 - 20 - 30 kW  
(at 6000 rpm)  
Tool diameter max: 250 mm



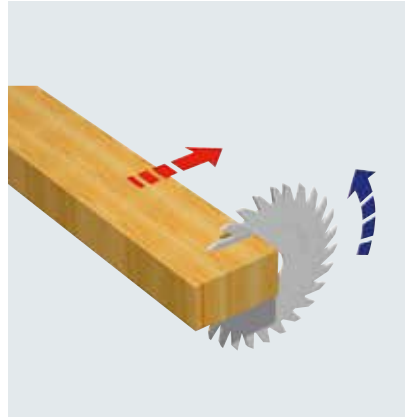
## Scoring and hogging unit

Equipped with pneumatic anti-chipping device  
Power: 3+8,2 kW at 6000 rpm  
3 + 10.5 kW at 6000 rpm  
3 + 13.2 kW at 6000 rpm  
3 + 15 kW at 6000 rpm  
Scoring tool diameter max: 180 mm  
Hogging tool diameter max: 250 mm



## Double hogging unit

Available in different sizes:  
6 - 8,2 - 10,5 - 13,2 - 15 kW (at 6000 rpm)  
Tool diameter max: 250 mm



### Operating unit with saw blade

Available in different sizes:  
8,2 - 10 - 15 - 18 - 20 - 30 kW (at 6000 rpm)  
Tool diameter max: 300 mm



### Operating unit for profiling tools

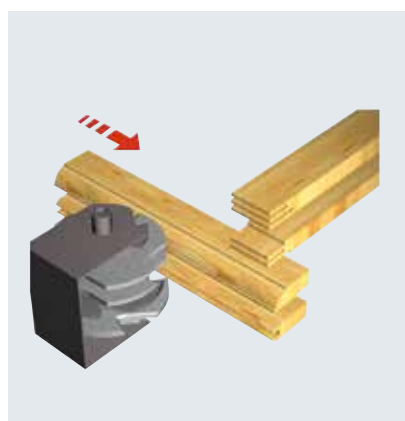
Available in different sizes:  
8,2 - 10,5 - 13,2 - 15 - 18 - 20 - 30 kW (at 6000 rpm)  
Tool diameter max: 220 mm

HSK 63F and 85S tool chuck electrospindles, air or liquid cooled, are available in different sizes and performance curves.



### Devices for timed machining operations

To execute stopped grooves or anti-chipping function.

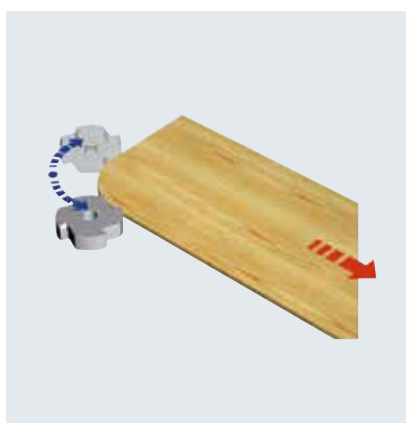


### Operating units equipped with multi-tool spindles.

# OPERATING UNITS



Edge trimming and chamfering unit for top, bottom or both edges.

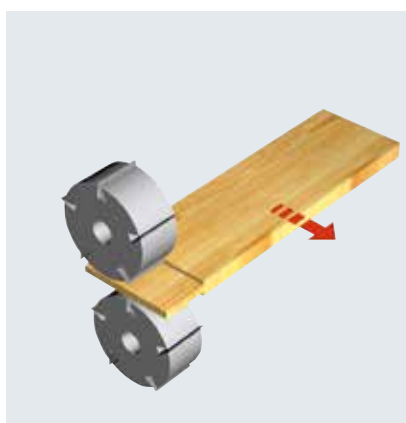
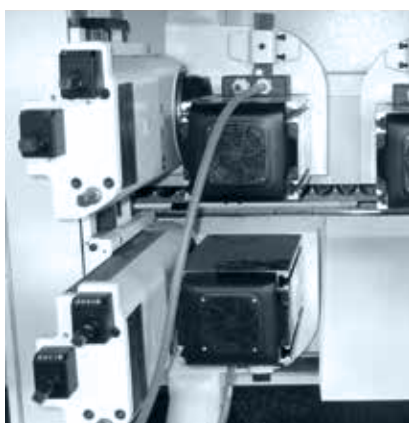


**Rounding unit R8**

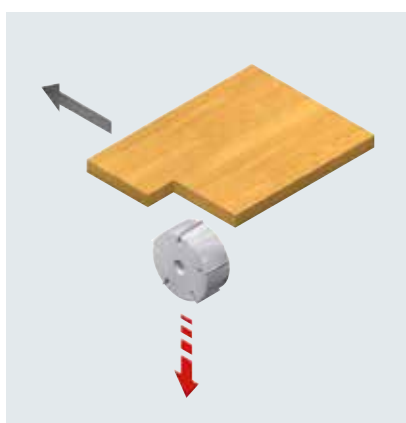
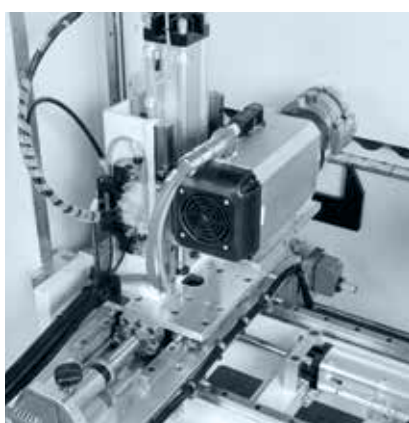
2 motors 0,75 kW each  
Rotation speed 12000-18000 rpm  
Rounding radius max. 8 mm

**Rounding unit mod. C1 - C2**

4 motors 0,35 kW each  
Rotation speed 12000 rpm  
Rounding radius max. 4 mm

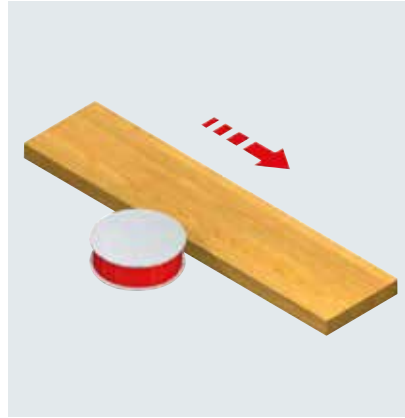


Roughing unit



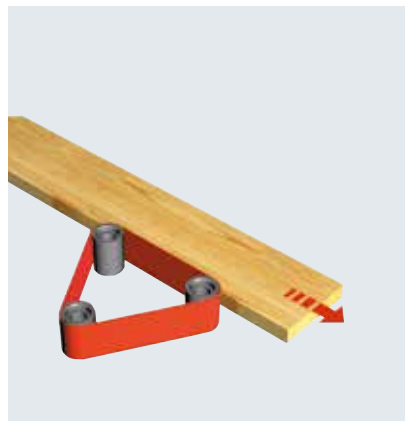
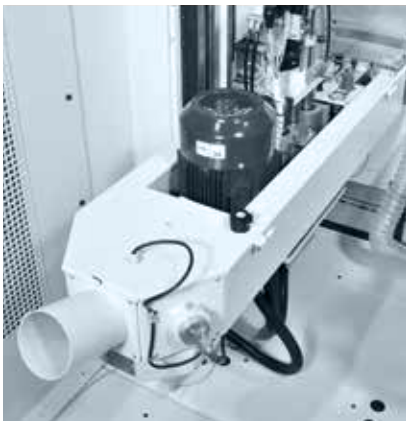
Notching unit





**Sanding unit with abrasive wheel/disk or brushing unit**

Motor power 1,8 kW  
Rotation speed 700-2000 rpm



**Belt sanding unit for flat surfaces**

Motor power 2,2 kW  
Rotation speed 1400 rpm



**Belt sanding unit for shaped profiles**

Motor power 2,2 kW  
Rotation speed 700-1400 rpm

**Belt sanding unit for top and/or bottom edges**

Motor power 0,25 kW  
Rotation speed 1400 rpm

# TECHNOLOGY AT THE DISPOSAL OF OPERATOR



To reduce unproductive time, it is possible to adjust the operating units during the processing cycle for longer time than that prescribed by the DET ISO 19085-12 standard in complete safety.



Program selection can be performed by bar code reading.



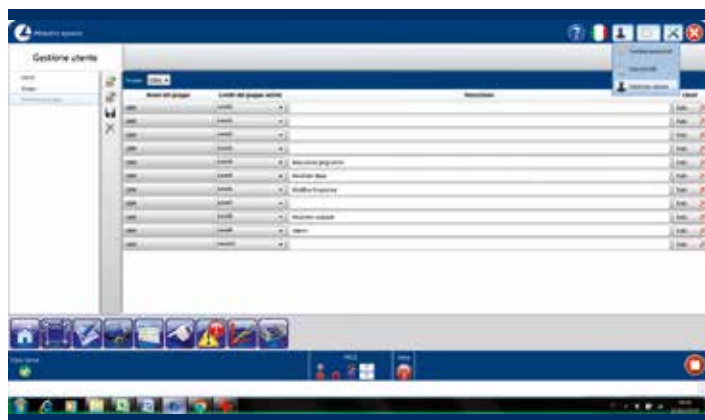
Available with decimal or centesimal resolution, readouts guide the operator during the operating units manual adjustment.



Automatic lubrication system of the guides for the mobile beam positioning, pressure beams and each electronic axis. It avoids the ordinary manual maintenance of mechanical parts.

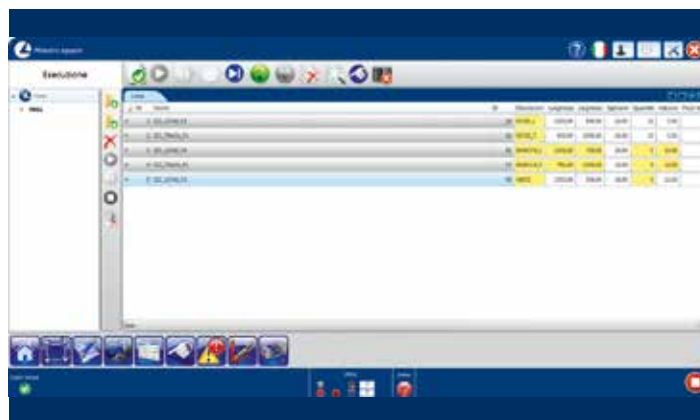
# “SMART” PRODUCTION

**celaschi p60**  
automatic double-end tenoner



## CUSTOMIZABLE HMI SCREENS

It is possible to configure the access rights to the various functions, change the language without restarting the application and display the page for program management and execution of the work list also in Imperial units.



## QUICK MACHINING CHANGES

The use of the production list, combined with the electronic adjustment of the units, allows to speed up machining changes, since the operator does not have to perform any operation but only wait for the load consent.



## WORKPIECES FEEDING RATE

Optimized production with the best possible interspace in the various conditions.

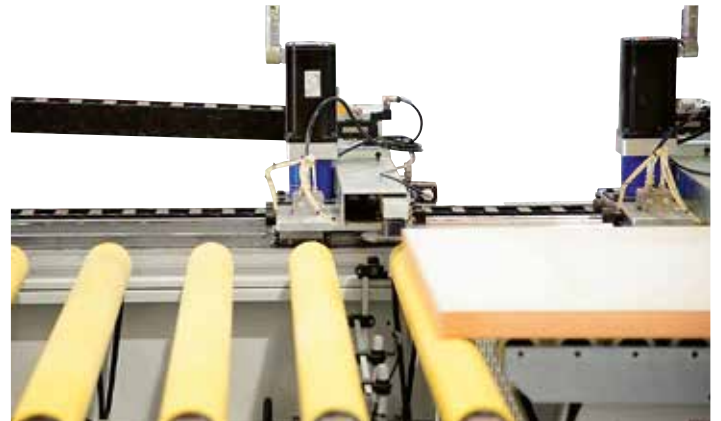
# AUTOMATION READY

Pre-arrangement for integration with automatic loading and unloading systems; customized solutions for every need.



Customizable according to the production capacity and workpieces weight, the pneumatic supports lift the workpieces at the entrance of the second machine of the line, waiting for the reference dogs.





Pneumatic or brushless drive systems ensure the reference accuracy in any working condition, during the introduction of the workpieces into the first machine of the line.

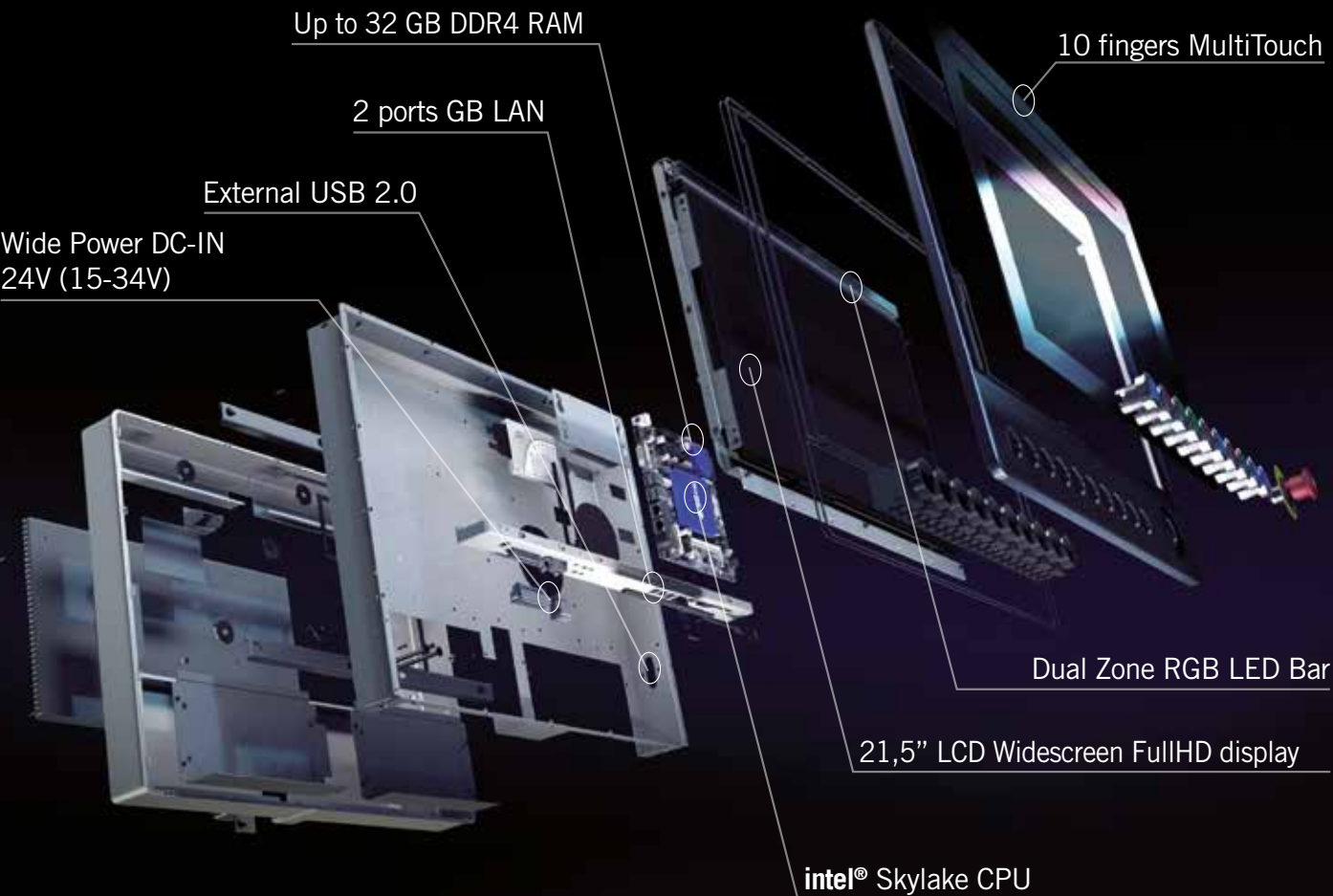


Single or double pneumatic centering devices ensure precise positioning of the workpieces before they are picked up by the dogs, when entering the second machine of the line.

# EYE-M PRO CONSOLE

Machine control within everyone's reach thanks to the touch screen control panel, with an intuitive and powerful operator interface.

The new **eye-M PRO** console allows connection via internet with the SCM Service. Our engineers can so access remotely at all machine levels to perform diagnostics, solve problems or update the machine logic in real time.





3 possible installations: in the electrical cabinet, machine onboard, on independent mobile support.

The integrated LED bar allows the operator to know at any time the status of the machine, even at a distance, at a glance.

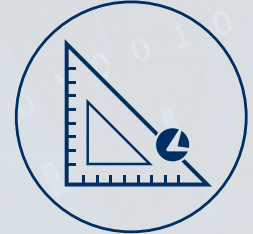


# M Maestro Digital Systems

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

## Maestro active square

Maestro active square is the human machine interface software for double-end tenoners. The software allows to create working programs and monitor the machine in real time during processing. At the end of the process, historical data and reports can be sent to the company information system.



### OFFICE

#### ERP



### FACTORY

machine programs

feedback to ERP



squaring





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.

# SOFTWARE

## Factory

**Maestro**  
active square

**THE SOFTWARE  
THAT MAKES  
YOUR WORK  
EASY**

### FUNCTIONS



#### Real time control of the process

Maestro active square allows creating, saving and editing of working programs and their immediate start. It also detects the machine status, monitors the production and records historic data.



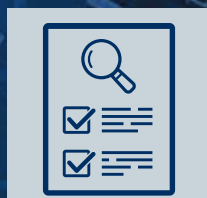
#### Full control of production performances

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



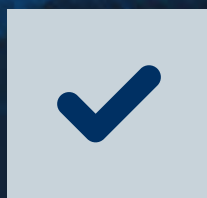
#### Organize your production

Maestro active square allows to create different users with different roles and authorizations (e.g. operator, maintainer, administrator, ...). Besides, it is possible to detect activities, productivity and events that occurred in a specific time interval.



#### Total quality of the finished product

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



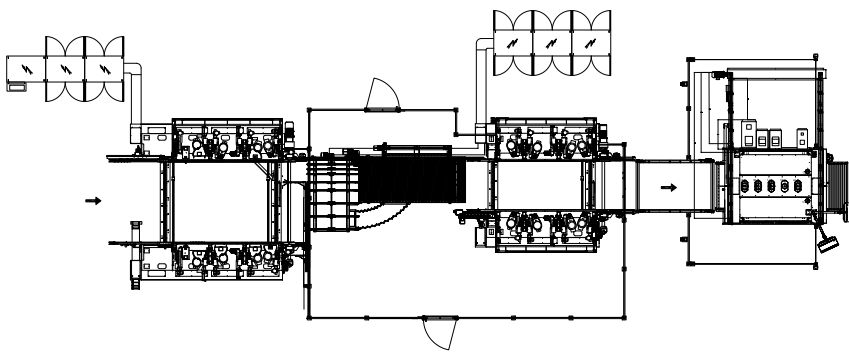
#### Simplified diagnostics

Maestro active square guides the operator in the identification phase of alarms and warning indicators for the easy resolution of errors.

# COMPLETE AND INTEGRATED SOLUTIONS

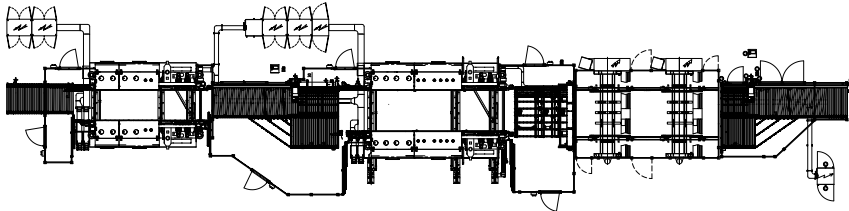
## EVERY PROBLEM IS A CHALLENGE FOR US

In close collaboration with you, we identify, study and realize complete and tailor-made solutions according to the type of products, productivity and available space.



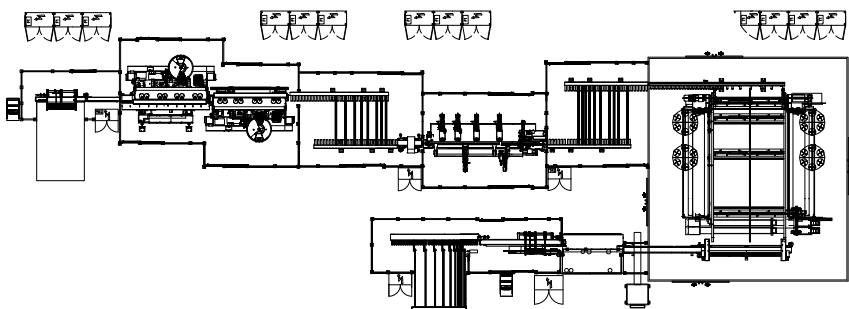
### SQUARING AND SANDING LINE FOR KITCHEN DOORS WITH MANUAL LOADING AND UNLOADING SYSTEM

1. CELASCHI P60 Crosswise double-end tenoner
2. CELASCHI GP100 Panel turning device
3. CELASCHI P60 Lengthwise double-end tenoner
4. Transfer
5. DMC Sanding machine



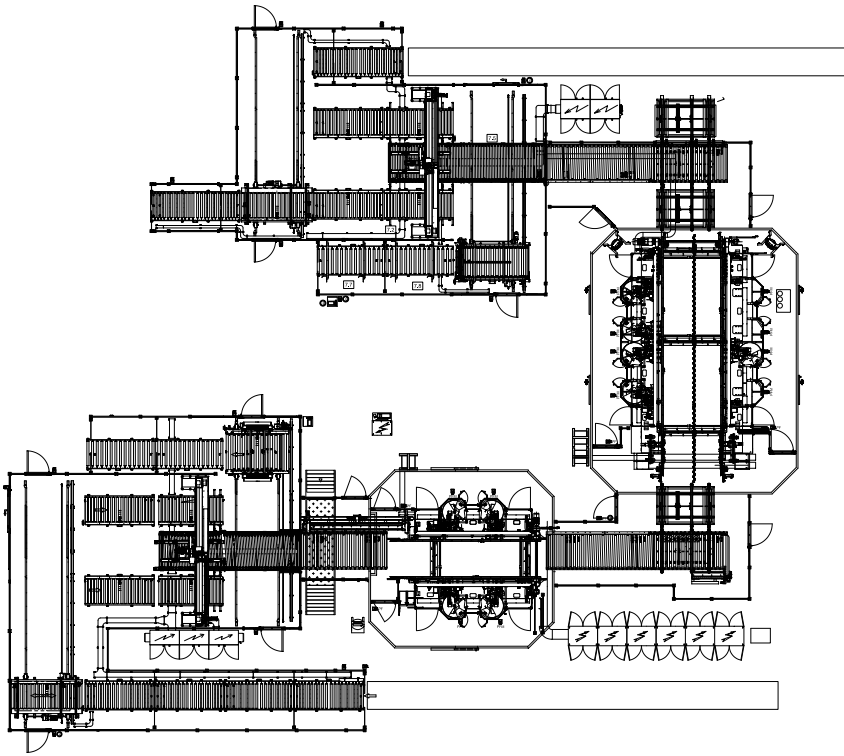
### SQUARING, PROFILING AND DRILLING LINE FOR FURNITURE ELEMENTS WITH MANUAL LOADING AND UNLOADING SYSTEM

1. Manual loading roller conveyor for panels
2. CELASCHI P60 Lengthwise double-end tenoner
3. MAHROS Panel turning device
4. CELASCHI P60 Crosswise double-end tenoner
5. MAHROS Belt transfer
6. MORBIDELLI Drilling machine
7. MAHROS Unloading roller conveyor



### SYSTEM 1 - LINE FOR DOORS AND WINDOWS PRODUCTION

1. Loading station
2. SUPERSET NT Automatic throughfeed moulder
3. Transfer
4. CELASCHI P60 Double-end tenoner
5. 90° Transfer
6. Transfer with buffer function
7. FLEXIMAT Drilling and routing machine
8. Transfer with buffer function
9. PROFITECH Left profiling machine
10. PROFITECH Right profiling machine
11. Unloading station



#### CALIBRATING LINE FOR DOORS

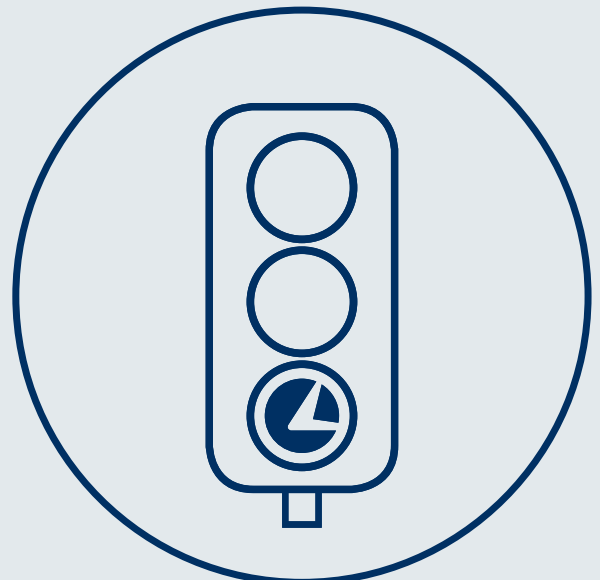
1. MAHROS Roller conveyors and shuttle for stacks loading
2. MAHROS Portal-framework feeder
3. CELASCHI MVL Feeding roller conveyor
4. CELASCHI P60 Lengthwise double-end tenoner
5. CELASCHI MV40 90° Transfer and buffer
6. CELASCHI P60 Crosswise double-end tenoner
7. CELASCHI MV40 90° Transfer and buffer
8. MAHROS Portal-framework stacker
9. MAHROS Shuttle and roller conveyors for stacks unloading

**Maestro active watch** is the supervisory and control software that allows all areas of the line to be integrated into a single control point for quick and easy management of the various functions.

The user-friendly graphic interface, a simple and immediate use, the technology and the architecture allow to:

- Manage the entire production cycle ensuring high flexibility for both large batches and smaller orders.
- Display production line, work areas and machine data of a specific area.
- Control the production flow by sending programs to all the machines also from the company management system.
- Display the parameters and processing characteristics of the product with the possibility to change the configured data quickly and easily.
- Develop productivity reports for the entire line.
- Provide diagnostic tools and statistics on the status of the machine in line.
- Obtain remote assistance.

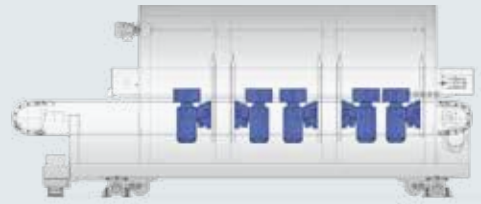
The use of open and standardized interfaces in terms of hardware and software allows efficient integration even on third-party systems.



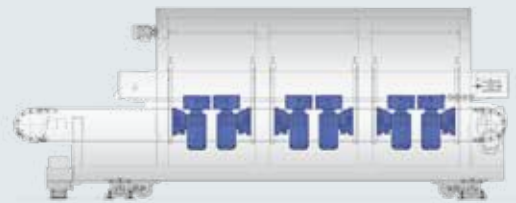
# MODULARITY

Continuous use, versatility and exclusive solutions for quality processing: these are the specific characteristics of celaschi p60 double-end tenoners, available in 5 different sizes.

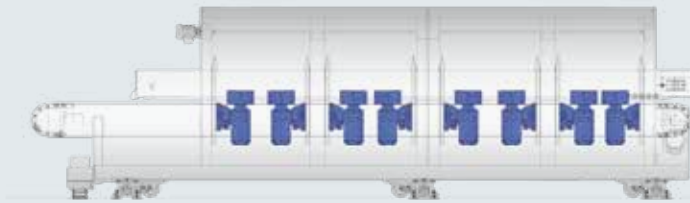
*celaschi p60 base 5*



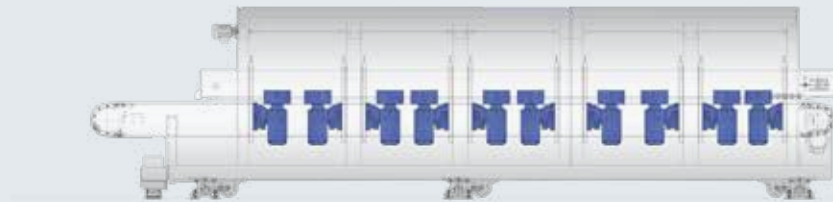
*celaschi p60 base 6*



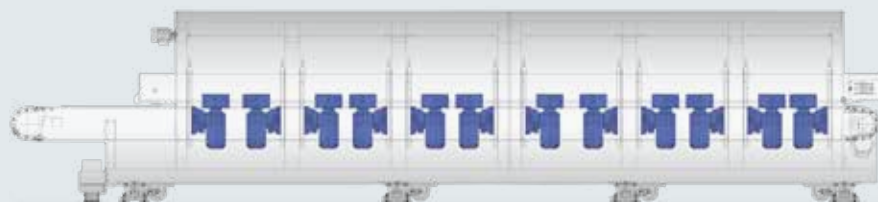
*celaschi p60 base 8*



*celaschi p60 base 10*



*celaschi p60 base 12*



celaschi p60			
Structure	5 - 6 - 8 - 10 - 12 operating units for each side		
Workpiece transport system	Maximum speed	m/min	60
	Chain tracks centre distance	mm	4050 - 9450
	Dogs pitch	mm	270 - 450 - 900
Mobile beam	Maximum beam opening	mm	6100
	Positioning speed	m/min	2,8 - 12
Workpiece dimensions	Width	mm	120 - 6100
	Thickness	mm	3 - 200
Top pressure beams with electronic positioning	Vertical stroke	mm	20
	Vertical adjustment	mm	3 - 150
	Positioning speed	m/min	0,25



## ENERGY ONLY WHEN YOU NEED IT

**SavEnergy** allows you to operate with the devices only when really necessary. The machine moves in stand-by automatically when there are no panels to process.

*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 prescribed by CE Norms.*

Maximum recorded noise levels based on functioning parameters established by ISO 7960 - 1995 Annex E. Acoustic pressure while working 91 dB(A) (measured according to EN ISO 11202:2010, K variance = 4dB). Acoustic power while working 104 dB(A) (measured according to EN ISO 3746:2010, K variance = 4dB). Despite the existence of a correlation between "conventional" noise emission values mentioned above and average personal exposure of the operators during the 8 hours, these also depend on the specific functioning conditions, length of exposure, acoustics characteristics of the working environment and by the presence of additional sources of noise, that is the number of machines and 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

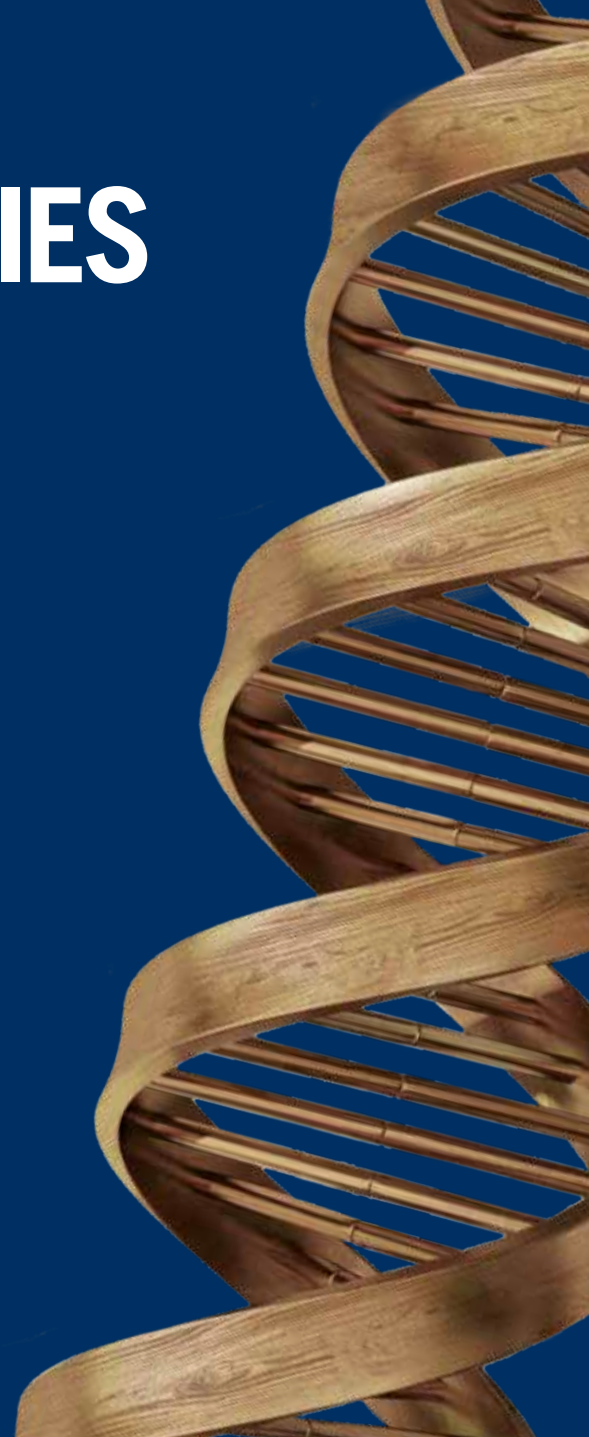
**90%** export

**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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