

oikos range

5- and 6-axis machining centres



SOLUTIONS AND SERVICES ALWAYS CONNECTED FOR YOU

SCM, A STRATEGIC PARTNER, BY YOUR SIDE AT EACH STAGE OF YOUR BUSINESS PROCESS

SCM has always stood alongside companies in the woodworking sector, with **technological solutions and services which are constantly connected to maximise the machine's efficiency, improve product quality and reduce operating costs.**

SCM GROUP, THE MOST ADVANCED SKILLS AND KNOW-HOW IN THE FIELDS

INDUSTRIAL MACHINERY

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



Woodworking
technology



Composite, aluminium,
plastic, glass, stone, metal
technology

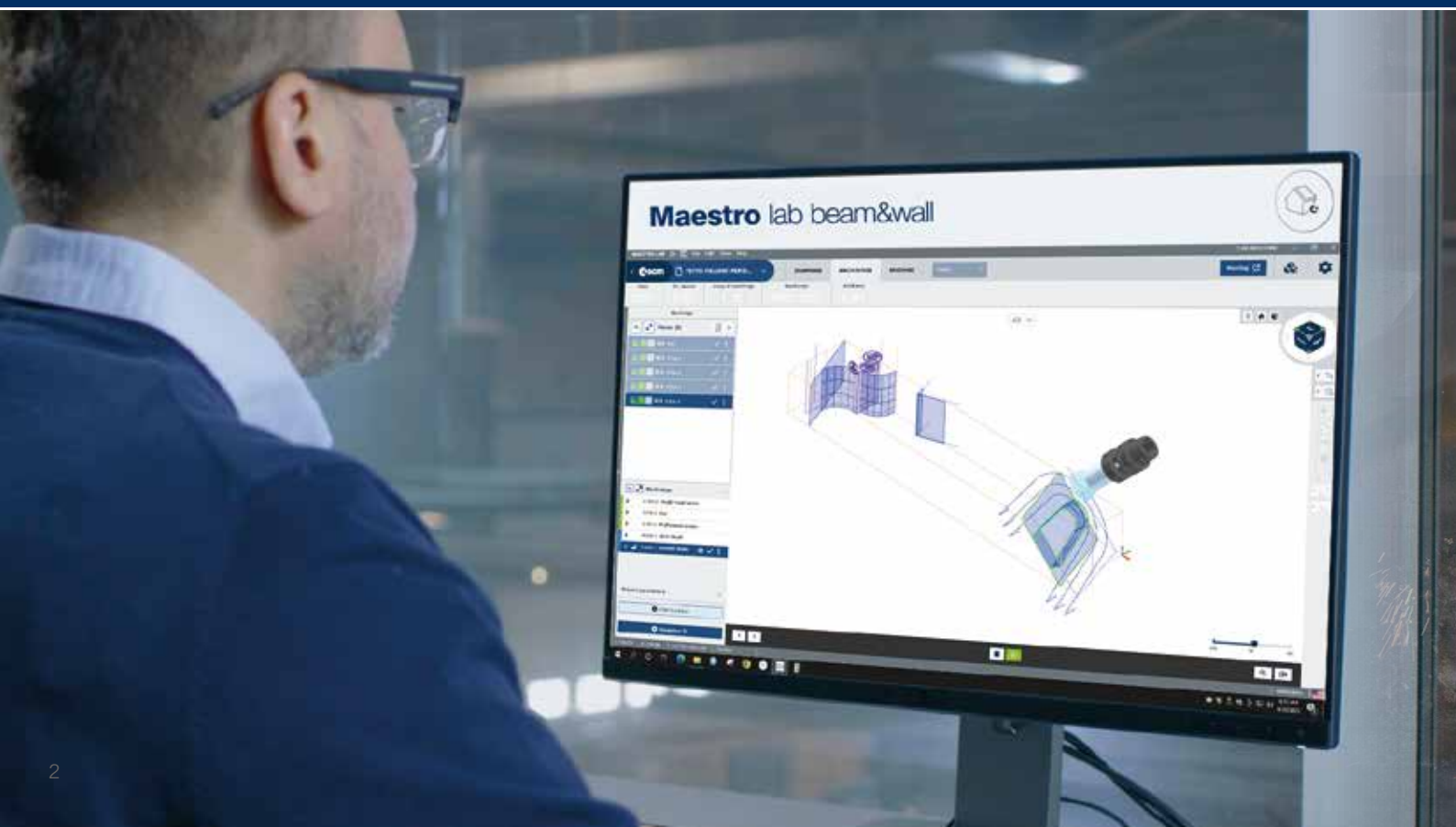


Technologies for the profiles
processing of aluminium,
PVC and light alloy



Automated systems for
industry

SCM Group manages the entire manufacturing process: from the production of cast iron components to software





OF MACHINERY AND INDUSTRIAL COMPONENTS OVER THE LAST 70 YEARS

INDUSTRIAL COMPONENTS

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

HITECO

Electrospindles
and technological
components

Les

Electrical
panels

steelmec

Metalworking and
mechanical machining

scmfonderie

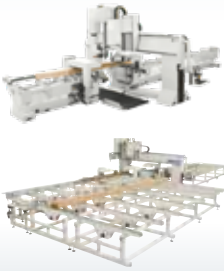



Iron casting

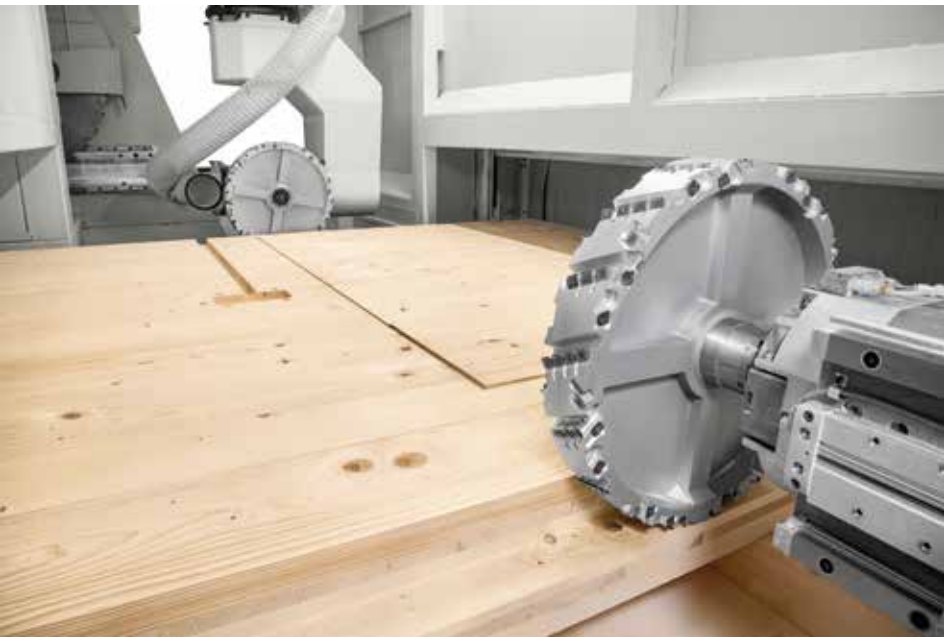
solutions and digital services specifically designed to support customers in their daily operations.








SCM, GLOBAL PARTNER FOR THE TIMBER

SCM Group's activity in the timber construction sector has a long tradition: **for over 30 years we have been developing cutting-edge solutions** and we have been offering a wide range of machines worldwide. We are

1979	1992	2005	2010	2012	2017
<p>ROUTECH brand is born, pioneering the first electronic routing machines with numerical control in Italy.</p> <p>ROUTECH</p>	<p>Starts the collaboration between ROUTECH and SCM GROUP.</p> <p>scmgroup</p>	<p>The RT4000 is launched, the first CNC machining centre by ROUTECH for solid wood and laminated beams.</p> 	<p>AREA debuts, a 5-axis machining centre with a mobile portal structure.</p> 	<p>OIKOS 12 is launched, a machining centre equipped with innovative 6-axis technology.</p> 	<p>SCM Wood Division is established, that encompasses all models for the timber construction sector in the SCM Group.</p> 



specialized in the processing of straight beams, camber beams and modular elements with the **Oikos range**, as well as the processing of curved beams, CLT panels, and insulation panels with the **Area range**.

2018	2020	2021	2023	2025
<p>OIKOS X is introduced, an evolution of the OIKOS 12 model.</p> 	<p>AREA XL is launched, dedicated to the industrial processing of CLT.</p> 	<p>OIKOS XL debuts, developed for column processing.</p> 	<p>OIKOS XS is introduced, the ideal machining centre for prefabricated walls and more.</p> 	<p>OIKOS X4 is launched, designed for the processing of camber beams.</p> 



OIKOS, A RANGE IN CONSTANT EVOLUT

The wide range of SCM Oikos solutions for beams and modular element enables to better face the daily and future challenges in the timber construction. **Every type of construction project has specific requirements, and our various models are designed to meet them in the most optimal way.**



ROOFS: Traditional carpentry elements of small and medium size with highly precise joints.



LARGE BEAMS: Structural elements in glulam of medium and big size, characterized by cuts, joints, mortises and holes to be realized with high precision.



FRAMES: Small-section structural elements, for which good machining precision is required, but above all, high speed.

FRAMES	ROOFS	LARGE BEAMS	MASS TIMBER	CAMBER BEAMS	MODULAR 1200 MM	MODEL
						Oikos XS 450
						Oikos XS 650
						Oikos X
						Oikos X4
						Oikos X+
						Oikos XL
						Oikos XL+



MASS TIMBER: Structural elements of large size, mainly characterized by operations requiring high cutting capacity.



CAMBER BEAMS: Engineered glulam elements, glued with a slight curvature, allowing for a significant material saving.



MODULAR 1200 MM: Large CLT and wooden box elements, with a width of up to 1250 mm.

MACHINING UNITS	SAWBLADE RADIUS	CROSS-SECTION MAX.
3 to 6	240 mm	240x450 mm
3 to 6	70+240 mm	310x650 mm
1	150 mm	300x1250 mm
1	150 mm	300x1250 mm
2	150+300 mm	300x1250 mm
1	250 mm	610x1250 mm
2	250+400 mm	610x1250 mm

LEGEND

 *Optimal*

 *Functional*

 *Poor*

 *Inadequate*

To process beam sections up to 450x240 or 650x310 with no workpiece repositioning

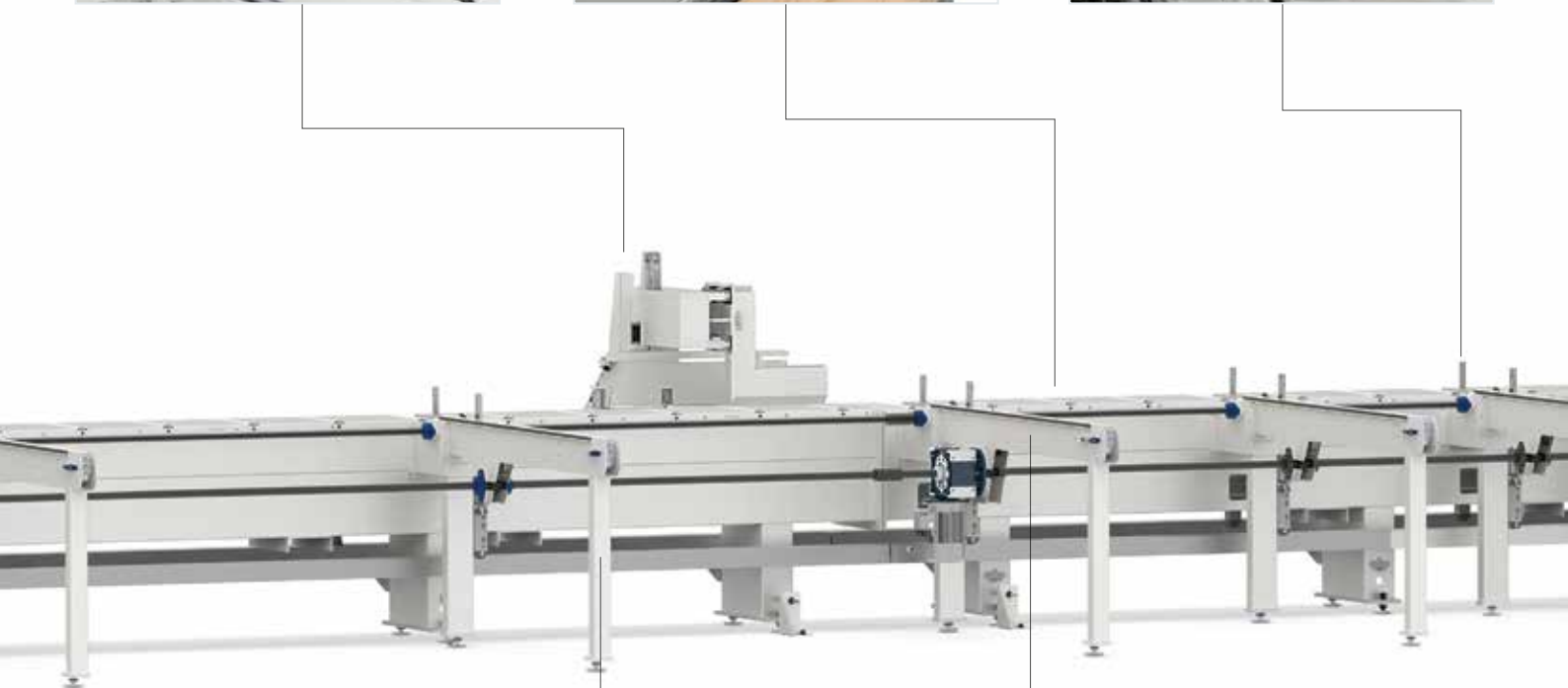
High speed workpiece feeding, thanks to rigid clamps with vertical pressure device to eliminate bending of the workpiece.



Rapid loading phase of the timber into the machine, thanks to the automatic loading system.



Retractable rear mechanical stops for referencing the timber at the end of the loading phase and ensuring high precision.



Possibility of adding, in front of the loading chains, convenient removable supports for accommodating packs of beams.



Possibility of positioning a series of beams by means of the motorized chain loading system with buffer.

mm quickly,



5-axis machining unit aimed to using a maximum diameter 760 mm sawblade for the realization of **cutting** operations on all 5 faces of the element.

Work area can be equipped with several machining units, **satisfying all customer's needs.**

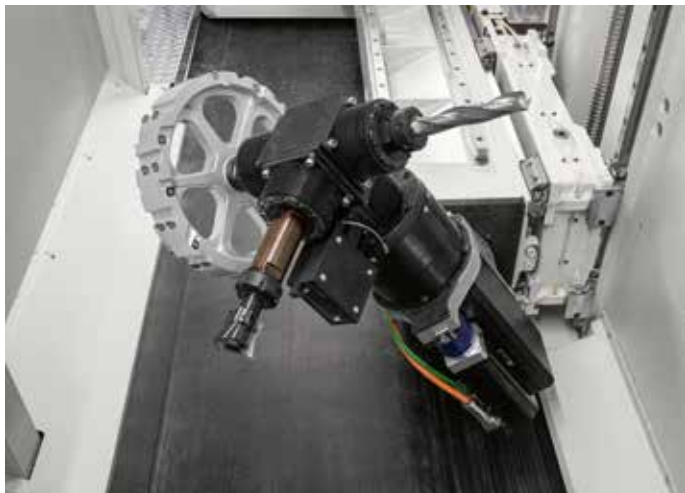


High precision ensured by horizontal and vertical pressure rollers that avoid vibrations of the workpiece during processing.



Simple unloading of the processed element. Easy storage and retrieval of elements, thanks to the parallel-branched unloading buffer.

Up to 6 machining units for precise operations on all



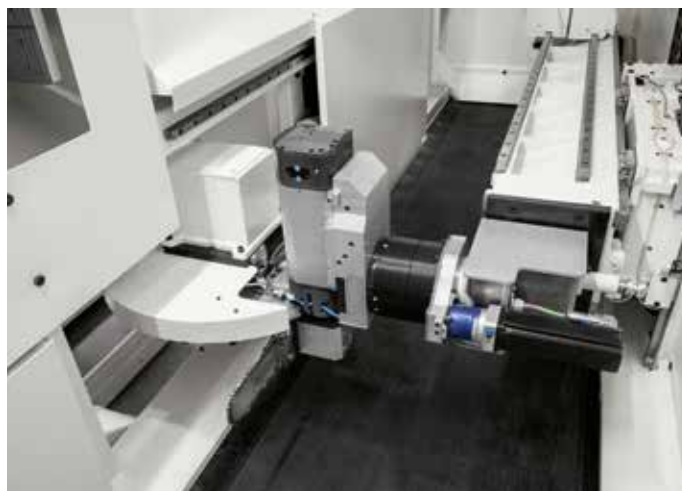
Revolver unit with 3 outputs with differentiated speeds. Power 10 kW (S1).



5-axis unit **Flex-5** with automatic tool changer, marker and laser probe. Power 12.8 kW (S1).



Independent sawblade unit with 240 mm cutting capacity, power 10.6 kW (S1). Dynamic workpiece support device.



Rapid15 tool store compatible with tools and aggregates.

TECHNICAL DATA

		XS 450	XS 650
Workpiece dimensions			
Max. cross-section	mm	450 x 240	650 x 310
Min. cross-section	mm	40 x 20	40 x 20
Max. length	m	6 - 10 - 13,5 - 16	6 - 10 - 13,5 - 16
Min. length	mm	1.300	1.300
Max. weight (for automatic loading)	kg	800	1.500

6 faces of the workpiece



Horizontal mortising and drilling units with guide-system.



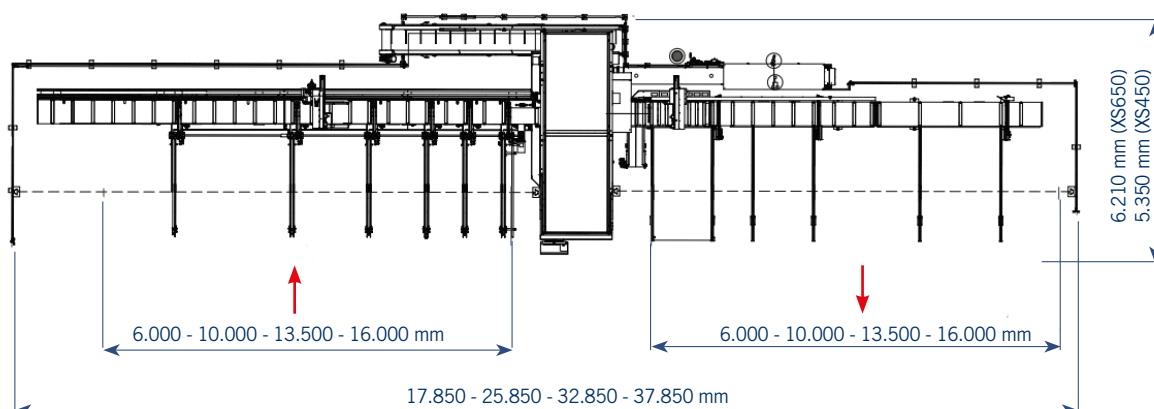
Recovery of short pieces with return to the operator, without requiring machine stoppage.



Automatic laser probing cycle, dedicated to the machining of pockets, holes and dovetail joints.



Vertical drilling and routing units with 3 axes independent movements.



DISCOVER MORE



The most versatile solution to process cross-sections



High degree of automation, thanks to the motorized chains loading system with grippers for optimal grip of workpiece and automatic positioning on the roller conveyor.



No slipping or damage to the element thanks to special roller lifters.

Strong and precise handling of the element by means of large-sized self-centering clamps.



Easily extractable supports to place packages of beams in front of the loading chains.

Easy positioning of a set of beams using the motorized chains loading system with buffer.

up to 1250x300 mm



High accuracy ensured by horizontal and vertical pressers with electronic positioning.



Machining head unit with optimized tool change phase, thanks to the tool stores positioned strategically in relation to the work area.

Simple unloading of the processed element, by means of a rear mechanical pusher.



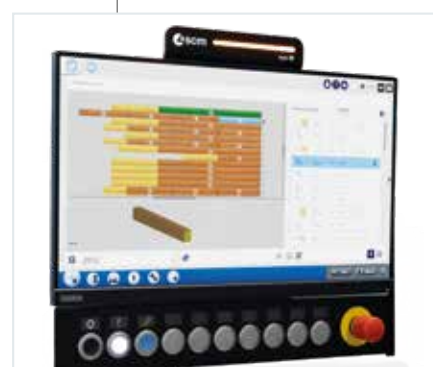
Maximum safety for the operator, cleaning of the work area and dust containment thanks to the integrated and pressurized protection cabin.



Storage and easy collection of elements, from the outfeed buffer equipped with parallel supports.



Efficient shavings removal by means of the bidirectional motorized conveyors belt, ensuring a constant cleaning of the work area.



Reduced footprint and maximum functionality thanks to the operator console integrated into the cabin; complete monitoring of processing by video surveillance system.

Innovative machining head unit for high quality



6-axis machining head unit with 13 kW / 25 kW power (S1).
Full accessibility to all six faces of the workpiece.



Quick tool change thanks to a motorized tool store located
near the work area.



Workpiece overhang dynamically reduced thanks to
symmetrical guide carriages.



Precise processing ensured by a sturdy cast iron arm.

TECHNICAL DATA

WORKPIECE DIMENSIONS AT INFEEED

Max. cross-section	mm	1.250 x 300
Min. cross-section	mm	50 x 20
Max. length	m	9 - 13,5 - 19
Min. length	mm	1.200
Max. weight	kg	2.500-4.000

operations



Self-centering feeding clamps that guarantee a perfect grip of the workpiece.



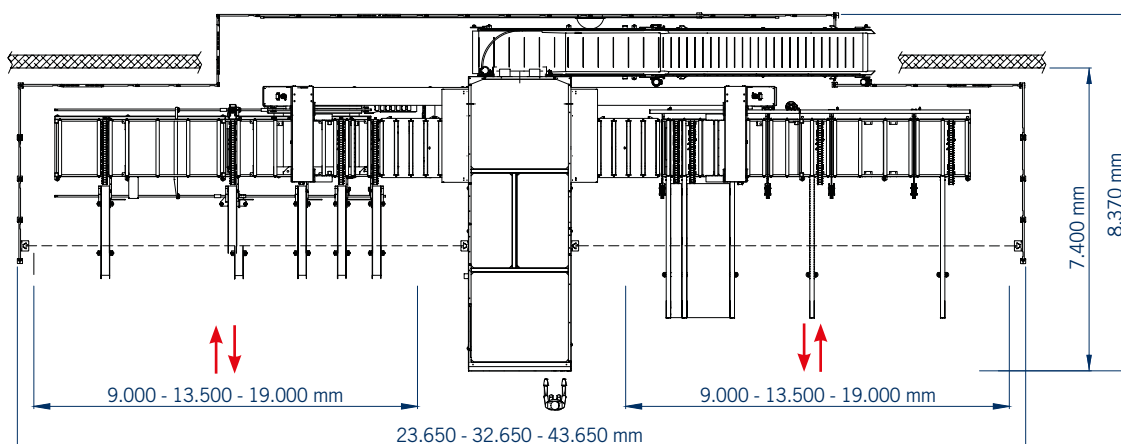
Integrated in the machining head unit **laser probe**, for high precision drilling and routing operations.



Perfect also for processing CLT modular panels with nesting technology.



Robust structure with centralized lubrication of the axes.



DISCOVER MORE



A real innovation for the industrial processing of with cross-section up to 1250x300 mm

Oikos X4 represents the evolution of Oikos X, inheriting all its features and enhancing them to enable the processing of non-rectilinear beams!

**EXCLUSIVE
SOLUTION
DEVELOPED
BY SCM**



*Double clamps on loading and unloading for a **smart** handling of non-rectilinear beams.*



No slipping or damage to the element thanks to special roller lifters.

camber beams and not only,



Complete processing of all workpiece faces thanks to the 6-axis machining head unit.

Fully automated loading via motorized chains and grippers; automatic positioning on the roller conveyor.



Maximum safety for the operator, cleanliness of the work area and dust containment thanks to the integral and pressurized protection cabin



WHY CAMBER BEAMS?

Modern engineering makes it possible to apply a slight curvature during beam pressing, allowing for **material savings of up to 10%**. The camber beams are ideal in case of industrial constructions, logistic warehouses, sports halls etc.

An advanced and proven machining head unit, of clamps for workpiece handling



Have you ever considered processing non-rectilinear beams with a through-feed machining centre?

What sets Oikos X4 apart are its exclusive **four clamps with individually controlled pressure**, designed to automatically handle beams with a certain degree of curvature.

The four clamps dynamically adapt to the shape of the workpiece, ensuring extremely high machining precision.



TECHNICAL DATA

		CAMBER BEAMS	STRAIGHT BEAMS
Workpiece dimensions			
Max. cross-section	mm	675 x 300	1.250 x 300
Min. cross-section	mm	90 x 20	50 x 20
Max. length	m	13,5 - 16 - 19	13,5 - 16 - 19
Min. length	m	3	1,2
Max. weight (for automatic loading)	kg	2.500	2.500

combined with a new generation



Curvature verification kit to help the machine operator.



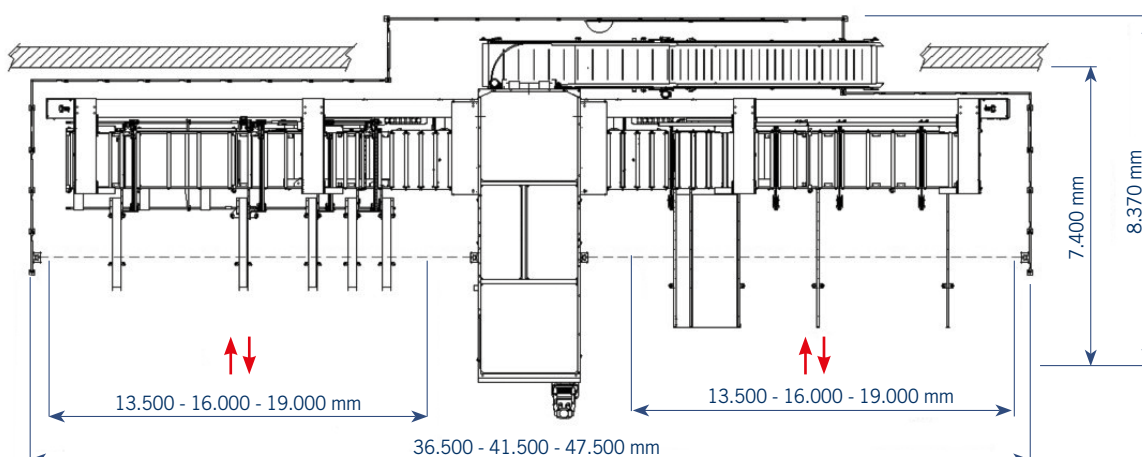
6-axis machining head unit with automatic tool change.
Power: 13 kW / 25 kW (S1).



Camber beam processing mode: intelligent handling through full-stroke clamps and pressure rollers.



Straight beam and panel processing mode: it operates just like the Oikos X.



DISCOVER MORE



For the mass timber challenge: up to 1250x610 mm



No vibrations thanks to the use of pressure rollers that secure the element during processing.



Firm and precise movement of the element by means of large self-centering clamps.



Automatic unloading of the finished element by means of a rear mechanical pusher.



The machine can be configured with a loading/unloading system on either the right or left side of the cabin, depending on production requirements. Its robust structure allows handling of elements weighing up to 4000 kg.

in cross-section and 8 tonnes in weight



Handling of large elements with the possibility of positioning workpieces up to 500 mm thick on the loading chains.



Precision and safety during loading thanks to CNC-controlled grippers that ensure a perfect grip.



No slipping or damage to the element thanks to special roller lifters.

Maximum safety for the operator, cleanliness of the work area and dust containment thanks to the integral, pressurized protection cabin.

Power and precision for the mass timber best seller



Sawblade of 740 mm diameter, perfect for executing precise cuts and deep notches for hardware fittings.



Mortise chain aggregate available for executing precise internal corner cleaning and long notches.



Each tool can operate on all sides of the element, ensuring complete processing.



Centralized lubrication for axes and aggregates.

TECHNICAL DATA

WORKPIECE DIMENSIONS AT INFEEED

Max. cross-section	mm	1.250 x 610
Max. cross-section (<i>compatible with bar pull-off</i>)	mm	1.250 x 500
Min. cross-section	mm	50 x 20
Max. length	m	9 - 13,5 - 19
Max. weight	kg	2.500 - 4.000 - 8.000



Integrated **laser probe** on the machining head unit ensures ultra-precise routing and drilling operations.



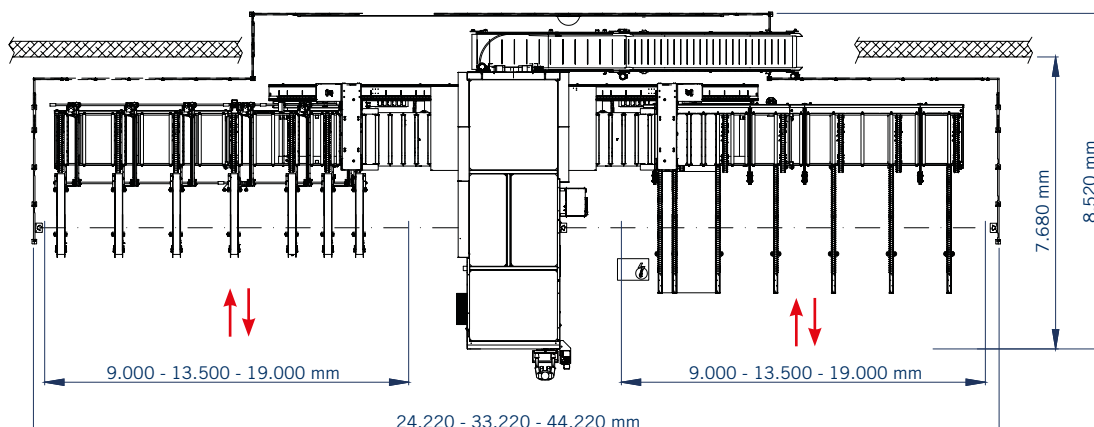
25 kW (S1) electrospindle for high-performance chip removal.



High-precision machining thanks to a robust cast-iron arm.



With Oikos XL, the operator is always at the center. Total control of the job thanks to direct visibility, an integrated video monitoring system, and the **eye-M TOP PLUS** console.



DISCOVER MORE



Oikos X+ and Oikos XL+

For those who demand more!

Oikos X+ and Oikos XL+ stand out for the integration of an independent 5-axis sawblade unit, compatible with large-diameter blades.

Oikos X+ delivers enhanced performance thanks to a tool change system that operates in masked time, significantly boosting productivity compared to the base model. Additionally, the larger sawblade diameter increases cutting capacity up to 300 mm.

Oikos XL+ is the ideal solution for industrial-scale production of large elements. The combined use of a 1150 mm diameter sawblade with the sawblade on the main 6-axis machining unit allows for bar pull-off cuts on thicknesses up to 610 mm.



Sawblade unit

oikos x+ / oikos xl+



5-axis sawblade unit, 17 kW (S1), compatible with 900 mm diameter blade. Cutting capacity: 300 mm.

oikos x+
DISCOVER MORE



5-axis sawblade unit, 18.4 kW (S1), compatible with 1150 mm diameter blade. Cutting capacity: 400 mm.

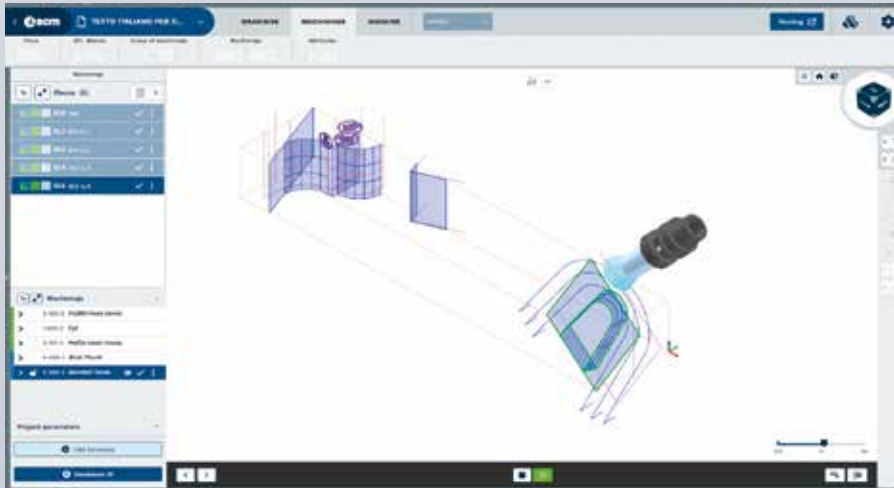
oikos xl+
DISCOVER MORE



PROGRAMMING SOFTWARE

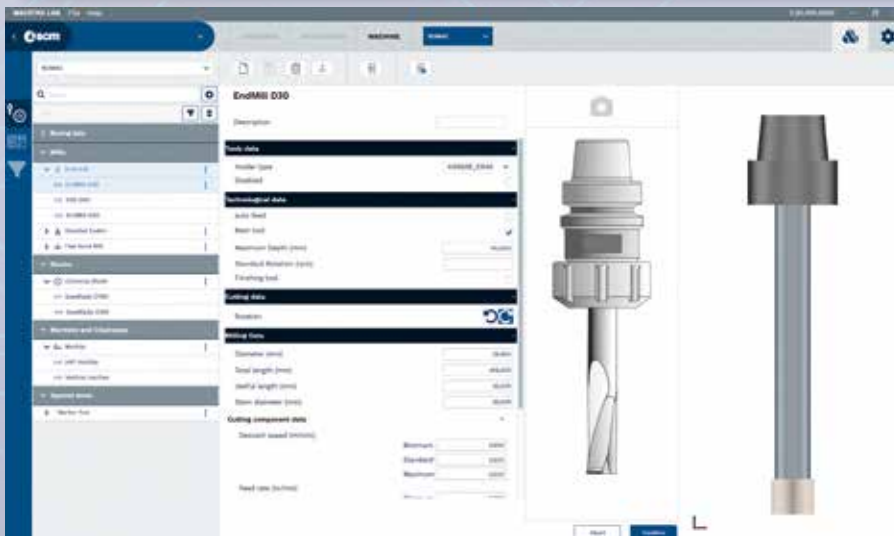
Maestro lab beam&wall

Maestro lab beam&wall is the software developed by SCM that interprets files in the “BTL” format exported by the leading design CAD systems in the sector and automatically converts them into machine-executable programs. It selects the best machining strategies and assigns the necessary tools to each path, in order to execute the geometries defined in the input file.



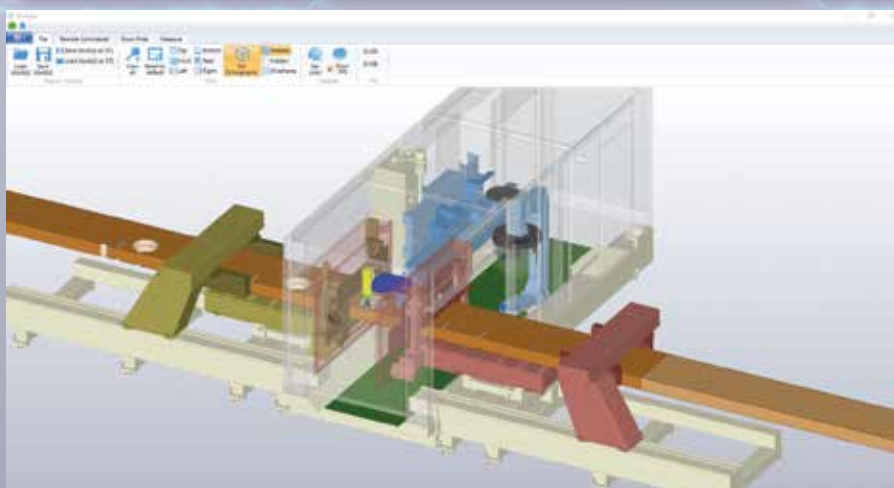
PROGRAMMING ENVIRONMENT

Designed for the import, analysis, and verification of projects and individual machining operations. It also allows the user to modify machining strategies and manually create new elements by selecting operations from the available macro library.



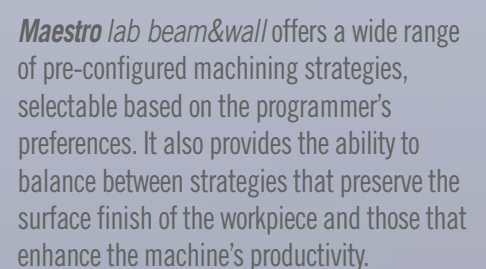
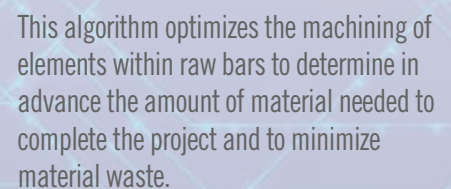
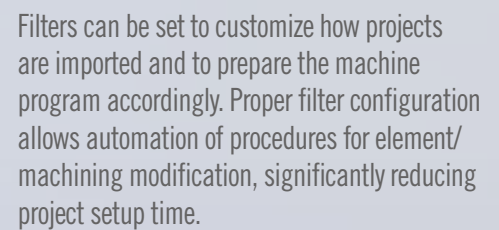
TOOL MANAGEMENT ENVIRONMENT

Dedicated to the visualization and configuration of usable tools. New tools and aggregates can be created by selecting from predefined types and simply modifying their geometric and technological parameters.



3D SIMULATOR

The simulator allows verification of individual operations or the entire program before actual machining. It is available both on the office PC and the operator console, offering numerous advantages, including the elimination of collision risks and the calculation of production times and costs.



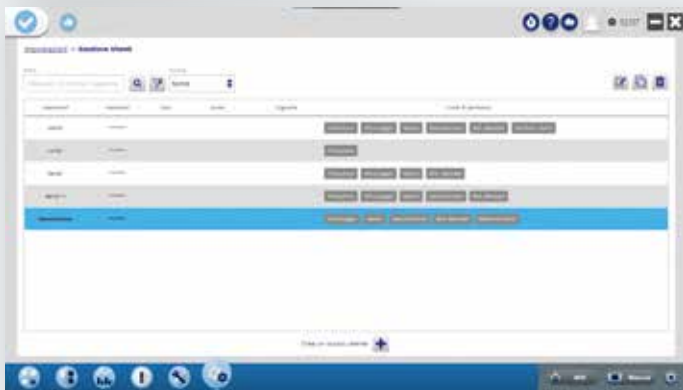
HMI SOFTWARE

Maestro active beam&wall



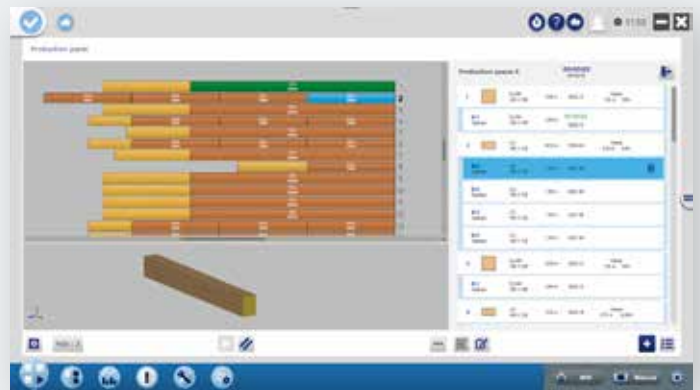
It is the software developed by SCM that allows the operator to manage the machine in all aspects: from the simple start of real machining operations to maintenance management, as well as generating production reports for Industry 4.0.

It is installed on the **eye-M TOP PLUS** operator console, located on the front of the cabin, and enables internet connectivity with SCM Service.



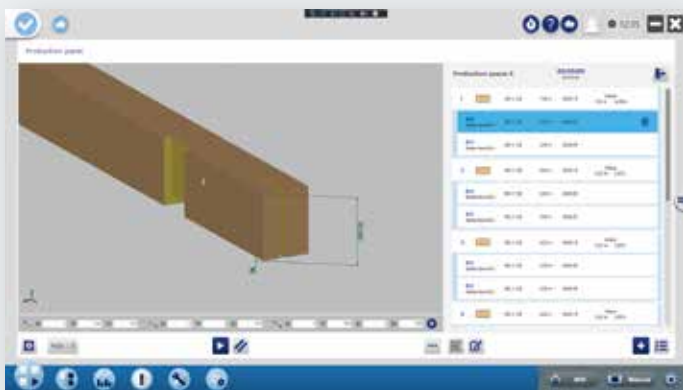
ACCESS LEVEL MANAGEMENT

The ability to configure one or more access levels for each machine user: program execution, maintenance, manual controls, etc.



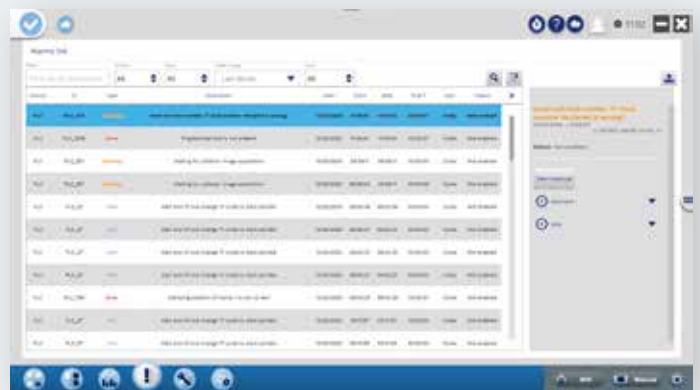
MULTI-PROJECT

It allows the optimization of producing elements with the same cross-section but from different projects on the same raw bars, aiming to minimize material waste. The optimization process is fully automatic.



3D VISUALIZATION

The element being machined can be viewed in 3D, with the ability to export and take measurements. In real-time, the tool paths performed by the machining units are displayed on the 3D model of the element.



JOB MANAGEMENT

Management of routine maintenance, machine alarms, work shifts, label printing, and production report creation are just a few of the functions the software offers to the user.

Maestro connect

CONNECT YOUR MACHINE AND GAIN ACCESS TO A WORLD OF SERVICES

Connecting your machine through IoT technology 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.

SMART MACHINE

THE ENTIRE MACHINERY FLEET AT YOUR FINGERTIPS



- **REAL-TIME MONITORING** of the machine status, components, and performance in term of availability and efficiency.
- **INSTANT NOTIFICATIONS** on pc, tablet, and smartphone when machine alarms occur, allowing you to act timely and avoid additional equipment damages.

SMART MAINTENANCE

PLANNING AND MAINTENANCE: PREVENTION IS BETTER THAN... REPAIRING!



- **PLANNING:** In the Smart Maintenance section, you can find all the tools you need to plan the maintenance of the entire machinery fleet to prevent downtimes.
- **TROUBLESHOOTING:** Thanks to intuitive smart documents, Maestro connect guides the operator in the maintenance activities procedures step by step.
- **SERVICE REQUEST:** Do you need further support? Open a ticket in one click, and our experts will assist you.

WARRANTY EXTENSION

Is your machine still under warranty?

You will be able to activate the second year of warranty with facilitated conditions directly via Maestro connect.



SMART ANALYTICS

REPORT AND KPI: GET TO KNOW BETTER YOUR MACHINE



Maestro connect reports and KPIs provide an in-depth analysis of production results, enabling you to know your machine's performance in detail.

OEE: WHY IT'S IMPORTANT TO KNOW IT



The Overall Equipment Efficiency Indicator (OEE) allows you to monitor the three variables: **Availability, Performance and Quality**. By doing so, you'll be able to detect the lower one and act on it: the performance of your machine will be the highest ever.



SERVICE AND MAINTENANCE



TRAINING SERVICE



SPARE PARTS



DIGITAL SERVICES

SCM OFFERS A FULL RANGE OF **HIGHLY SPECIALISED SERVICES** WITH A QUALITY AND RELIABILITY THAT STEM FROM 70 YEARS OF EXPERIENCE IN THE INDUSTRY.

From installation and production start-up to services and maintenance. From training to the supply of specific original spare parts: **we provide solutions designed around you!**

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My Scm

WE'LL GO THE EXTRA MILE FOR YOU



SERVICE AND MAINTENANCE

- Remote support
- Scheduled maintenance contracts
- Warranty extension



TRAINING SERVICE

- Courses for machine operators
- Software and programming courses
- Training in production start-up



SPARE PARTS

- Recommended spare parts list
- E-shop
- Interactive spare-parts catalogues
- Repairs on electronic parts, glue tanks and electro-spindles



DIGITAL SERVICES

- Maestro Connect - IoT platform to be constantly connected with your machines
- Smartech - assistance with augmented reality
- My Scm portal - opening of service ticket and single point of access to the apps and Services tools



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