

# SCM's new automated and connected solutions on stage at Ligna 2023

*SCM's Smart&Human Factory has once again been updated: new automation systems and human, machine and robot interaction for a highly customised, versatile, interconnected and sustainable production.*

*Also making its début at the trade fair is an integrated cell for small businesses and many other new entries for all the application areas in secondary wood processing.*

*(Hanover, 15-19 May 2023 - Hall 13)*

SCM is preparing for the upcoming edition of Ligna (Hanover, 15-19 May 2023) consolidated by a growth in double figures, that brought the Group's turnover in 2022 to **850 million Euro**, and with technological proposals that meet the most current needs of a highly **customised, versatile, interconnected** and **sustainable** production.

In an exhibition area covering **3,000 m<sup>2</sup>** between **Hall 13** and **Hall 16** (the latter referring to the Superfici technologies for finishing), visitors to Ligna will have an opportunity to discover the vast range of new products developed by the Italian Group to meet every production need when machining panels, solid wood, timber construction and artisan woodworking.

Innovation with a common goal: to make processes more efficient, keep down costs, consumption and waste and simplify their management, as is the case with the **Smart&Human Factory** that will be presented in Hanover in **two distinct versions for industry and the small businesses**.

*"At Ligna - declares **Pietro Gheller, SCM's Product&Markets Director** - we will give solid evidence of our ability to provide top-quality solutions for every woodworking application. We will present advanced automation systems that stand apart for being modular and configurable to suit the customer's needs and support a top-quality, flexible production while still guaranteeing high standards in efficiency and productivity".*

The new SCM digital factory, continues Gheller: *"is integrated and interconnected to the company's MES systems to optimise more complex production flows. Furthermore, it allows for real-time, 360° planning and monitoring of all the process stages, even remotely: from the order to design, right up to the after-sales service. The aim is to encourage an optimal, more sustainable use of energy resources and the materials used by the customer, as well as improve the plant's resources, by pre-empting the need for maintenance and preventing any machine stops thanks to the data collected being processed".*

## **The Smart&Human Factory for the furniture industry**

The system of flexible cells on display in Hanover can produce up to **400 furnishing components per shift** and is mainly aimed at **furniture kit manufacturers**.

This is one of the many configurations that the Smart&Human Factory can assume based on customer demands. The cells are integrated with **articulated robots** and connected by unmanned **AMR shuttles**.

In the **beam saw** area, SCM will be presenting its new **gabbiani gt2** flexible cell **with articulated robot** for automatic loading and unloading. The cell has been designed to optimise shifts and combine "batch 1" machining needs with those of large-volume production. The cell is enhanced by the new **Maestro optiwise** optimiser, and has been designed for manned or unmanned use, allowing for immediate and automatic switching between one mode and another: the robot positions or removes the additional modules between the shelves, required for it to work properly. In automatic mode with robot, the cell allows for work to be done with no shift limitations, relieving the operator of low-value work, and allowing for even small, finished pieces to be handled very easily. Pack cutting can be performed when operating in manned mode.

In the **edgebanding** area, SCM will be presenting a **stefani cell E** flexible cell that combines the numerous advantages of the **stefani x** industrial edgebander, in terms of productivity and machining quality, with the advantages of a flexible and automated integration of the entire production loop. In a logic of complete automation, the panels are supplied autonomously to the edgebander by an industrial articulated robot. On exiting, the **Pickback** bridge system guarantees the timely return of the panels after longitudinal or transversal machining. The cell is governed by **Maestro active edge** HMI software for a simple, intuitive control, and is designed for an intensive use over several shifts, with a speed of **25 metres per minute**. It guarantees an ideal application of the edge without the use of glue, thanks to AirFusion+ technology, and outstanding machining quality even on the most delicate, innovative materials thanks to electronic controls. Other new entries include the **morbidelli cx220** drilling and dowelling flexible cell with robot that creates all the parts of a piece of furniture more efficiently, even with pieces that differ considerably from one another. The cell produces **a panel per minute** and up to more than **400 panels per shift** with a single operator in just 50 m<sup>2</sup>. Its exclusive layout allows for two possible uses: unmanned, thanks to the integrated robot on the rear side that performs all the loading and unloading operations in complete autonomy for a continuous production cycle; with partial supervision by the operator who, in complete safety, can load and unload the panels at the front of the cell while the robot continues to machine on the opposite side. The process is completed with the **cut c200** right size box-making machine, a new solution for "batch 1" cardboard box packaging that produces **up to four boxes per minute** in different shapes and sizes. The secret? The high advancement speed and use of a brushless motor with extremely fast positioning set-up while the *order-by-order* production is enhanced by separate longitudinal cutting and creasing units and by a transversal unit. Another advantage is the optimisation of the consumption of cardboard based on the actual size of the box produced, choosing between three kinds of feed: single-sheet cardboard or continuous module, with flanked modules or with automatic switch up to eight modules.

### **Smart&Human Factory for small businesses**

Also taking centre stage at Ligna is an **integrated cell** for flexible and customised production from the raw material to the finished piece of furniture. As well as MES **Maestro easyFlow**, ideal for creating the perfect integration between the office and production area, the cell benefits from the advantages of the machines involved, considerably reducing times and margins of error.

With regards to squaring, SCM will present **class px 350i**: circular saw with mobile saw carriage with a up to 46° tilting blade that allows the maximum safety when working and perfect panel clamping: Advanced technology with the SCM **Thundercut** Optimizer/Sequencer, unique in driving the operator step by step when inserting the panel into the machine and in cutting.

Also in evidence the **me 40** edgebander, automatic edge bander with the new **eye-S compact** control panel with **Maestro active interface** for optimal machine management. The control manages the **new on/off system for the operating units** and graphically represents all the machine functions.

The process will be completed by **startech cn plus** CNC drilling centre has been designed to produce furniture parts easily and flexibly without repositioning the tools and without a need for operator intervention.

### **Digital software and services**

Flanking both of SCM's Smart&Human Factory processes will be a vast integrated proposal of software, MES and digital services on display in the "**Digital Integrated Woodworking Process**" area. Software and services that support the customer at each stage: data preparation, planning, production, monitoring and after-sales assistance, increasing efficiency and connecting the office to the factory.

The CAD/CAM office programming software is updated for the preparation of data for **Maestro cnc** machining centres and the 3D **Maestro pro view** simulator for machining panels and solid wood.

For production planning, optimisation and control, the MES **Maestro easyFlow** is the plug&play solution integrated with all of SCM's software and machines, coupled with both the Smart&Human Factory for industry and the one for artisan work to manage the 4.0 programming, management and interconnection of the entire production flow.

New entries also among the cutting optimisers. **Maestro optiwise** for the single blade and angular beam saws ensures you get the best out of the cut with minimum waste for both large and small production batches. Furthermore, it offers the best solution in terms of waste, time and costs and a *user experience* that is even simpler and more efficient.

**Maestro Power TMS**, the software that simplifies and optimises the management of tools inside CNC machining centre magazines is making its mark with the machining of solid wood. Depending on the kind of machining required, the software operates to maximise the capacity of the magazines and to speed up the tool change according to the production mix: more than 100 tools readily available, a reduction in times and an increase in productivity.

The HMI software and **Maestro active** line supervisors have also been updated for an even simpler, optimal control and interaction with all the SCM machines.

In support of the production **monitoring** stages, machine **maintenance** and after-sales **services**, the **digital services** enabled by the IoT **Maestro connect** platform are further enhanced. The aim is to guarantee maximum return on the machines and plants in conjunction with the constant support from SCM technicians. Nowadays, this IoT platform is integrated into the "**Woodworking made Izy**" project conducted by the most important machinery manufacturers who, together, have defined a standard interface and a common language for connecting the machines and MES to one another, which allows for overall control of the production process.

## **The latest for all woodworking application fields**

Making its mark among the panel **CNC machining centres** is the new **FlexDrive** system that will be applied to a **morbidelli m100** "All-in-One Technology" drilling-routing centre at the trade fair: via an innovative positioning system, this worktable allows for manual set up without the possibility of error thanks to the built-in light indicators on bars and suction cups/clamps.

Making its debut at Ligna is also the **accord 500** CNC machining centre to produce **doors, staircases and windows in solid wood**: this solution offers 30% higher productivity compared to market standards and an intelligent management with **Maestro power TMS**, the software that simplifies and optimises tool handling in the machine's magazines.

For panel **edgebanding**, SCM is further expanding its range with the new **olimpic 500** and **olimpic 300** models designed for artisan businesses. These edgebanders are equipped with large (from 10" to 15" in the standard version) new touch controls and offer a simple and intuitive use and can connect and synchronise with company management systems. Some of the advantages include machining even thin panels, generally used to manufacture drawers, and with a thickness of up to 60 mm, even in rounding.

Complete, versatile and fully electronic, **olimpic 500** guarantees machining with both EVA and Polyurethane glue and can machine 2 real radii with all the units, without compromising.

Also on show with its world preview is the **olimpic 300** automatic edgebander, the new entry level solution in the range for a demanding artisan production.

The **SCM Surface Technologies** integrated offer for **surface treatment** proposals has also been enhanced with new devices and models to meet every kind of process demand and end product type as well as achieve sophisticated finishing solutions.

Making its debut at Ligna will be SCM's **new laser unit** applied to the **dmc system** automatic sanding-calibrating machines, real flexible abrasive modular numeric control machining centres. This multi-purpose innovative unit is particularly suited to creating three-dimensional scoring on parquet, wooden elements, mdf panels to be veneered, fibre cement panels and solid surfaces of any length. Furthermore, thanks to the exclusive "**Self-Refilling**" technology, a distinctive advantage of SCM's laser unit, it is possible to make the most of the features in terms of power without further interruptions to the production flow.

A vast range of new Superfici solutions for finishing will also be presented in **Hall 16 (stand C6-D5)**. A dedicated area will be given over to the new **compact xl** in the sprayers section: designed to offer excellent production capacity, it reflects the company's worth, increasingly focused on energy saving, thanks to a more efficient paint recovery system and improved air circulation. All this "spiced up" by a completely new design.

Also on display is a **Uv led polymerisation system** with several UV monochromatic sources of different wavelengths to achieve a controlled multi-chromatic emission in a wider spectrum compared to the pure Uv led radiation. The result is chemical-physical performances fully comparable with standard Uv polymerisation, while maintaining the typical advantages offered by led.

For extra-opaque effects on the finish of the most varied end products and materials, another new entry will be the **Superfici excimatt**: excimer technology offering surprisingly smooth effects with high levels of opacity but with no more compromising on surface resistance.

Important new entries for the **timber construction** industry. SCM will be presenting **oikos xs**, the new CNC machining centre designed to meet the needs of new applications and new markets. Maximum implementation speed, precision and reduced footprint are the advantages of this model designed for all those companies involved in the production of prefabricated walls, trusses, roofs and blockhaus.

Also highlighted is the new **Maestro active beam&wall** human-machine interface software for all the CNC machining centres dedicated to timber construction. Programming, control and optimisation of the production flow directly on the machine are now possible in an even simpler, more intuitive fashion.

Even SCM's solutions for **sanding** are now applied to timber construction. SCM will be presenting **dmc system xl**, the highly modular automatic sanding-calibrating machine, capable of machining **X-lam/CLT** wall panels up to 3700 mm in width and 500 mm thick.

Alongside the SCM stand, in Hall 13, there will be an opportunity to discover the latest from **Randek**, innovative technologies manufacturer for the prefabricated housing market and partner to SCM in providing solutions for the entire timber construction industry.

On display, for **solid wood** machining, the **hypsos** 5-axis machining centre with integral booth, devised for designers and the three-dimensional machining of complex-shaped and large parts.

Space is also given over to the **connexus fj** numerically controlled tenoning-mortising machines, completely new at Ligna 2023, designed to satisfy all the machining demands of different kinds of solid wood or coated MDF cabinet doors in a single machine, including complex joints such as *miter door*, *face frame* and *French joint* on cabinet doors and shutters.

The **squaring-profiling** technology will be represented by a **celaschi cpm** single-sided profiling machine designed to process elements of cabinet doors and characterised by an operating unit made up of an electro-spindle with HSK attachment associated to an automatic 8-position tool magazine. The relative eye-M console will show all the potentials of the new **Maestro active square** interface.

Among the **new entries for joinery machines**, making its début is the **startech cn k** compact 3-axis machining centre, ideal for any kind of routing, decorations, scoring, creation of signs and 3D model prototype. The only one in its category to have a 2.4 kW electro-spindle, the machine, with integral booth, guarantees protection to the operator and a clean working environment; it is also very easy to program thanks to the virtual "open" human-machine interface for the importing of G-code from any kind of CAD/CAM software.

Also being highlighted are the new **eye-S compact** touch controls on edgebanders and the exclusive "**Blade Off**" technological solution applied to circular saws and fitted with exclusive **smart sensors** to machine in complete safety.

These and other SCM solutions not on show at the trade fair will be examined more closely in live demos and linkups with the Group's Technology Centre. In particular, the new **stefani sbx** squaring-edge bander dedicated to large-scale industry and the new **windorflex** automatic cell for complete window production.

**The appointment with SCM at Ligna is in Hall 13 and Hall 16 for Superfici technologies for finishing.**

### **Save the date: SCM press meeting at Ligna**

SCM will meet the international industry press at the press meeting due to be held at the SCM Stand (Hall 13) on **Tuesday, 16 May 2023 at 16:00.**

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**Scm Group** is a global leader in technologies for machining a wide range of materials and industrial components. Across the globe, the group's companies act as highly reliable partners to leading industries in a wide range of product sectors, from furniture to construction, automotive to aerospace, and yachting to plastic machining.

Scm Group coordinates, supports and develops a system of industrial excellence in 3 large highly specialised production centres in Italy, with a turnover of 850 million Euro, with 4,000 employees and a direct presence on all 5 continents.

#### **Press Office**

**Alessandra Leardini** – [alessandra.lear dini@scmgroup.com](mailto:alessandra.lear dini@scmgroup.com) Tel. +39 0541 700230 - mob. +39 344 3483015.