

CNC TECHNOLOGIES FOR MASS TIMBER BUILDINGS

In SCM we think that *“Wooden houses will be able to fly”* and this is also thanks to our innovative, technological solutions specifically designed for the timber building industry.

No later than 4000 years ago **man built pile-dwellings, today he builds skyscrapers**. Multi-storey buildings in wood are now a reality and they represent for sure the future.

In the next few years, **the advantages of wood** will become more and more evident: first of all, **eco-compatibility**, ecology and sustainability. In fact, from the production of the elements, till their assembly and final use, a wooden building needs **much less energy than a traditional one**. The way the elements are designed, manufactured and assembled keeps a **very low carbon footprint**. Last but not least, wood is also **completely recyclable**.

Investing in CNC machining centres means not only to increase productivity but also, and above all, to achieve a better quality of the end products. **Productivity and quality** are two key points for the success of the companies working in this sector.

Thanks to decades of experience gained by Scm in designing and manufacturing cnc machining centres for many applications, today we are able to offer **hi-technological cnc machining centres**, which can perfectly satisfy every production need: **“oikos x”**, **“area pmt”** and **“area xl”**.

Never stop improving with OIKOS X

“Oikos X” is the **new 6-axis cnc machining centre**, specifically designed to process structural beams, X-lam/CLT wall panels and insulating panels. It is the result of careful research and development to provide the industry with an ever more technological, performing solution.

“Oikos x” was designed with a view to **maximise performances** in terms of dimensions, dynamics and power. Fitted with a **13 kW electro-spindle**, the machining centre allows to process beams and panels with a maximum section of 1250x300 mm, a maximum length of 19,000 mm and a weight of 4,000 kg.

Furthermore, oikos x is equipped with two important new features:

- **the 24 kW electro-spindle** that optimises the machine's performance in terms of the material removal thus increasing overall productivity considerably;
- **the automatic loading and unloading management of rounded beams**, undoubtedly the best choice for those looking to focus on applications such as the construction of elements for wooden outdoor play equipment and street furniture.

The new machining centre is in perfect harmony with the needs of the 4.0 factory; the **Maestro beam&wall** software ensures complete integration with the most commonly used CAD systems in the industry; the multi-function, multi-touch **eye-M** operator panel makes everyday work much easier; the video-surveillance system means the entire process can be monitored in real time and integrated with **Smartech** service which places an SCM expert at the client's side, at any time, no matter where they are in the world, thanks to augmented reality technology.

5-axis flexibility for customized solutions with AREA

“Area” is a 5-axis machining centre with a mobile gantry-structure and modular composition, dedicated to the manufacturing of X-lam panels to be used in a wall or floor, structural beams, insulation panels and in particular, elements of high thickness.

By means of an electrospindle capable of reaching a power of **up to 30 kW**, area can perform any type of operations guaranteeing maximum rigidity in all conditions. Among the great features of this machining centre, the use of a saw blade of up to 1020 mm diameter and a chainsaw with 480 mm useful cut, plus **a worktable that can reach 4.5 m in width and 50 m in length**.

Thanks to the innovative solutions adopted in the realization of the supporting structures, area allows **extremely precise machining on elements longer than 50 m**.

The success of the cnc machining centres strongly depends on the effectiveness of the software, developed and continuously updated to be always in line with the standards of wood construction engineering.

For this reason, SCM has developed **Maestro beam&wall** software, which allows for maximum speed and ease of use: **a single interface from which to access the programming, program execution and tool management environments**.

Moreover, Maestro beam&wall includes the **simulation software**, which makes it possible to test the programs in advance on the PC in the office, with obvious benefits for the customer:

- elimination of collision risks, errors and downtime
- calculation of production time and costs.

No more size or shape limitations with PMT

“Pmt” is the latest SCM machining centre, **specifically designed for processing curved structural beams, even large sized ones**.

It is a completely modular machine and can, therefore, be configured to meet customers' production needs. The single 5-axis machining head unit version, capable of achieving a power of **up to 32 kW** can further be equipped with a second 5-axis saw blade unit 18 kW; the presence of a dual machining head unit allows to maximise performances in terms of productivity.

The availability of **up to 26 between tools and aggregates**, including a saw blade with a maximum diameter of 1080 mm, allows to execute all specific operations of the sector.

Extremely wide work areas that can be extended **up to 8 metres in width and 80 metres in length** enable processing in single area or pendulum cycle. The worktable can be equipped with double vacuum suction cups to correctly lock the beams via manual positioning in complete freedom.

AREA XL: the right choice for industrial production of CLT panels

But the big news from SCM for 2020 year is “area xl” cnc machining centre.

“area xl” is the evolution of “area”, conceived and realized for the industrial processing of large CLT panels; it was developed to meet the needs of those companies requiring high productivity, precision and reliability.

The processing of large CLT panels is characterized by **heavy duty stock removal, process automation** in the handling and referencing phases, as well as **cleaning of the work area**: these are the principles with which the new “area xl” has been designed.

SCM is never stop improving and therefore offering to the timber building industry innovative, technological solutions dedicated to this sector, in line with the demands of an ever expanding market.