

MACHINING CENTRES FOR DRILLING, ROUTING, EDGE BANDING AND NESTING

The evolution of SCM's "All-in-one technology" models, with the latest development in terms of drilling-routing, the integrated **morbidelli m220** machining centre with IoT **Maestro connect** solution, will be on display at Xylexpo.

The **integrated Maestro software suite**, which consists of different modules processed and designed to meet any present and future requirement of the customer, is another highlight of these technologies, confirming once again SCM's attention to the demands of the market. One of these modules is the **Maestro CNC** software, developed entirely in-house by SCM to provide an easy, intuitive and effective programming of machining centres and CNC drilling machines.

ALL-IN-ONE TECHNOLOGY

morbidelli m220

The new and exclusive **morbidelli m220** machining centre for drilling and routing furniture panels, complies fully with the "**Work simple. Work digital**" concept, which is SCM's branding slogan at the show.

Thanks to its unique characteristics, that is the possibility of machining with two parallel and independent drilling heads, **to drill various panels at the same time**, this drilling-routing machining centre allows for **savings of up to 70% on drilling cycles**, compared to traditional machining centres available on the market for this type of operations. Moreover the machinery is fitted with software for the automatic setup of the panels being machined, and an optimiser algorithm which can determine **the fastest drilling strategy**. The algorithm, combined with the drilling heads designed to operate in pairs with reduced interaxis, chooses independently whether to machine with two heads on the same panel or on two panels at the same time (one head on each panel).

With the **Maestro cnc** software that manages the machine and optimises all the machining cycles, you can create and produce **workpieces of any shape**, in just a few clicks.

Thanks to **Maestro connect**, the "IoT" (Internet of Things) instruments platform, **morbidelli m220** can collect, monitor and analyse the data from the machine, improving the services available to the customer.

Some of the other advantages of this machining centre:

- **maximum flexibility** thanks to the TV FLEX or TV FLEXMATIC worktable
- **unprecedented finish** with the JQX (Just Quality eXtreme) 5-axes electrospindle
- **space saving and maximum safety** with PRO-SPACE protections
- **possibility of having 60 tools available** and always ready on the machine

morbidelli m100f

The **morbidelli m100f** drilling and routing machining centre is a revolution for the entire sector. It provides the answers to all woodworking machining problems identified after an in-depth analysis of the market demands.

One of the reasons for its success is the aforementioned **Maestro cnc** software that, thanks to the numerous applications designed specifically for these revolutionary machining centres, is able to meet any machining requests, such as:

- **Maestro apps:** the library of programming functions that is immediately available and simple to use, ensuring considerable time savings when designing workpieces and faster and more efficient productions;
- **Maestro nest:** designed for “nesting” operations. It is able to process simple “rectangular” pieces, right up to the most varied and complex “free form” geometric shapes;
- **Maestro cabinet:** a unique software for the easy and intuitive production of custom furniture;
- **Maestro 3d:** the essential application for programming three-dimensional objects on 3 or 5-axes machining centres, with powerful CAD tools, that can easily and quickly manage particularly complex surfaces.

Another unique aspect of the **morbidelli m100f** machining centre is its “ALL-IN-ONE” technology: a single machining centre is able to meet the demands of companies and small woodworking workshops that produce furniture, soundproof panels, acoustic cases or nautical solutions.

The machining centre offers multiple advantages:

- **freedom, accessibility and safety:** the design of the morbidelli m100f allows the operators to load and unload large-sized panels in total freedom and safety; panels up to 2,200 mm wide and 250 mm thick can be loaded. The **PRO-SPEED** safety protections allow the machine to be used at the maximum feed speed, which is automatically reduced when the operator accesses the area marked by the front photocell barrier;
- **absolute flexibility thanks to the configurability of the machining unit:** the machining unit is the only one on the market that can host up to four work units, along with a device to insert dowels with glue;
- **unparalleled finish levels with the 5-axes electrospindle:** the JQX 5-axes electrospindle is the absolute pinnacle of excellence for this market segment;
- **drastic reduction in the tool change-over times:** with the **FAST 14** system tool changes take less than 15 seconds between machining operations. This has been made possible with the 14-position magazine, fitted directly on the mobile unit that, along with the other magazines on the machine, provides up to 60 tools to create any product;
- **savings of 60% in the drilling cycles:** an exceptional result obtained with the configurations of drilling heads, designed to execute any work diagram on any type of furniture and on every style of construction;
- **reduced maintenance:** the **RO.AX** (Rotoaxial spindle technology) spindles operate for over 1,000 work hours without maintenance;
- **ideal for nesting machining operations:** extruded aluminium worktable with the possibility of securing **custom equipment thanks to the exclusive T-shaped grooves on the worktable.**

EXCEPTIONAL EDGE BANDING morbidelli p200

morbidelli p200 is amongst the highest performing machining centres whilst still remaining very easy to use, with the integrated module of the **Maestro edge** suite. It is ideal to manage and optimise the entire routing, drilling and edge banding process of panels and shaped components. The application guarantees maximum simplicity, unparalleled performance levels and a considerable reduction in the production cycle times.

morbidelli p200 is an extremely compact machining centre with unique specifications and with an unparalleled price/performance ratio. It continues the global success of morbidelli's "ALL-IN-ONE TECHNOLOGY" range.

There are multiple pluses to the innovative machining centre, such as:

- **more compact and reliable edge banding unit:** as well as the drilling and routing units, it can apply edgings up to 84 mm high to **panels up to 80 mm thick**;
- **frees up space in the plant with the PRO-SPACE solution:** the absence of perimetral protections ensures considerable savings in terms of floor area covered as well as an improved optimisation of the company's logistics, allowing the operator to move around the whole machining centre;
- **table with HE-POD suction cups:** synonym of flexibility and innovation, they provide the worktable with the third dimension. All that is needed is a **single initial positioning** and not subsequent movement, thanks to the alternate lifting of the workpieces during the machining. This solution allows the dimensions of the worktable to be used fully, reducing the production cycle times by 30%;
- **maximum configurability:** the TV FLEXMATIC automatic worktable is the solution without compromises that allows up to 6 suction cups to be managed in each single bar, based on the dimensions and shape of the workpiece being machined, to guarantee the maximum hold-down effectiveness without risks of collisions at all times.

THE CUSTOM NESTING TECHNOLOGY FOR CUSTOMERS FIRMLY FOCUSED ON THE FUTURE morbidelli n100

The **morbidelli n100**, which at Xylexpo will be presented in the cell version, is a machining centre with a unique styling, designed for machining wood, plastic and non-ferrous metals.

The model complies with the highest standards of quality, flexibility and precision, and is available in numerous configurations, making it the most complete machining centre of its category.

A key aspect is the extremely easy to use **Maestro nest**, that allows the complete nesting process to be programmed, from the initial drawing stage up to the labelling of each single workpiece.

The main specifications of the machining centre are:

- **60% saving in the drilling cycle times** thanks to the RO.AX (Rotoaxial spindle technology) drilling heads
- **perfect hold-down of small and large-sized workpieces with the "H.E." (High Efficiency) worktable:** sturdy, practical and non-deformable over time thanks to the

laminated aluminium structure, it allows a fast and easy fixturing with the magnetic closure system of the vacuum: in just a few seconds the vacuum is concentrated only in the area where the workpiece is positioned;

- **maximum space-saving and flexibility in the PRO-SPACE version:** the absence of perimetral protections allows access to the worktable on all sides of the machine to handle small or large-sized panels;
- **available in stand-alone version or in cell version with the advantage, for the latter, to manage the entire nesting process with a single operator.**

MAXIMUM TECHNOLOGY IN LESS THAN 10 SQUARE METRES **morbidelli cx200**

As far as the **morbidelli cx200** drilling centre is concerned, **Maestro cnc** is ideal for simplifying the machining operations and optimising the cycle times, as it can process different types of materials (MDF, chipboard, panels with delicate finishes, etc.) and small-sized panels, as well as making it very easy to program the production of any component.

Maestro cabinet is particularly suited for programming modules for home and office furniture. Thanks to this specific software operators can layout and create new cabinet models, that can subsequently be customised in terms of measurements, components, materials, joints and machining.

The **morbidelli cx200** CNC drilling centre is extremely compact and **space-saving**. It performs drillings from above, blade cuts and vertical routing, without the need for the operator to setup the worktable. This highly productive solution is ideal for batch 1 machining operations. The machining centre is fitted with the innovative new **Ro.Ax roto-axial technology**, wholly developed by SCM. This solution increases the quality and precision in drilling, as well as productivity, thanks to the increased stiffness of the spindle at the maximum operating speed of 8000 RPM and the innovative inverter on the drilling heads, that allows for a faster material penetration speed. Another unique aspect of the drilling centre is the fastest cycle times of any other option available on the market, thanks to the double clamp and the two independent drilling heads that optimise any drilling diagram and to the 6.6 kW 24,000 RPM electrospindle with tools magazine.