

## The latest from SCM in drilling

### NEW MORBIDELLI CX220 CELL WITH ROBOT

The **morbidelli cx220** drilling and dowelling flexible cell with robot creates all the parts of a piece of furniture more efficiently, even with pieces that differ considerably from one another.

The cell, **on show in Ligna 2023 as part of the Smart&Human Factory production model for the furniture industry**, produces **one panel per minute** and over **400 panels per shift** with a single operator, in no more than 50m<sup>2</sup>.

**Smart&Human.** Thanks to the **exclusive layout** patented by SCM, the cell offers two options for use: operator-free 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 operate on the opposite side.

Integration at the highest level with the **Maestro active watch** supervisor software built into the machine panel PC.

**Excellent drilling on reduced sizes.** The cell benefits from all the advantages of morbidelli cx220: machine with reduced dimensions performing drilling, blade cutting and milling operations.

- **The lowest cycle times of any alternative on the market and maximum productivity** in machining "batch 1" thanks to the exclusive solutions such as: 3D PROBE software application that guarantees the reference for any kind of drilling on 5 sides; shaped clamps that allow drilling and routing operations even inside the clamping area without the need to reposition the piece;
- RO.AX spindles (Rotoaxial spindle technology) and 7.5 kW electrospindle with 6-position tool changer;
- **60% higher productivity** thanks to the two independent drilling and doweling heads with variable centre-to-centre distance, capable of working simultaneously on the panel;
- worktable tailored to even the most **delicate surfaces**.

### NEW MORBIDELLI CX110 AND PWX500 DRILLING MACHINES

Dreams *drill* happen: the dreams of furnishing and furniture component manufacturers are about to come true with a new generation of versatile drilling machines, offering high productivity, extreme precision and the possibility of integration into automated systems.

SCM presents **morbidelli cx110** and **morbidelli pwx500**, expanding its drilling solutions to offer an innovative and highly specialised response to the needs of both craft businesses and the large furniture industry. The two new solutions are to be found at either end of the vast range of **morbidelli** drilling machines: the **cx110** model is mainly dedicated to companies that, regardless of their size and productivity volumes, desire a compact solution that is versatile, efficient and capable of solving all the critical issues of flexible machining; **morbidelli pwx500**, on the other hand, is for large furniture manufacturers and contractors looking for high-speed, connected and integrated drilling solutions without sacrificing the quality of the finishing and precision.

### MORBIDELLI CX110

The **morbidelli cx110** drilling machine offers **maximum flexibility** in performing any kind of vertical and horizontal drilling in less than 8 square metres.

The **shaped clamp** makes machining much easier because it drastically reduces the cases in which it is necessary to reposition the clamp, reducing the cycle times. Another advantage is

represented by RO.AX spindles fitted on the drilling heads, with a rotation speed that can reach 8,000 rpm, maintaining a very high finishing quality.

The operator can efficiently and easily manage batch 1 drilling operations while having all the necessary tools always on board and benefiting from the advantages of an **automatic 6-position tool changer**.

The **accessibility** and ease of loading and handling the pieces is another distinctive plus: the machine is also ideal for those who need to machine lacquered and delicate panels because the new worktable has been designed to avoid any kind of friction.

Drilling is done with **extreme precision** and the guarantee of always having the correct corresponding piece while the machine is operating, without the risk of slipping or bending. This happens thanks to a four-sensor 3D PROBE decimal probing system and a presser that ensure **maximum workpiece stability** during machining. This stability is guaranteed irrespective of the repositioning of the clamp and also in the most unusual and elaborate machining: the slide bearings act as a continuous guide, providing considerable help to the operator and reducing possible errors with piece linearity.

This new drilling machine is **extremely versatile**: available in several configurations, it can also be fitted with a new unit to create "**Clamex**" joints.

### **MORBIDELLI PWX500**

The new **morbidelli pwx500** is the ideal drilling solution for connected and integrated production and to achieve highly competitive production standards per shift on medium and large batches.

Production ability has **increased by 10%** compared to market standards. In fact, the drilling machine is able to work intensively over several shifts and is designed to significantly reduce tooling changes and other operations that cause unproductive time.

**High productivity** is guaranteed even by the automatic repositioning system which is completed in under 45 seconds, including dowelling.

**Reliability** is another significant advantage: the system has been designed to have fewer moving components compared to standard ones, so fewer risks of damage over time.

This new drilling machine is also synonymous of high **efficiency**: indeed, it is the only one on the market to offer up to 5 rows of spindles on the right and left in order to reach the extremities of the panel to make structural holes according to different production needs.

Efficiency and high productivity combine with a considerable **machining simplicity** thanks to the optimiser software that controls the entire machine's set up, the drilling steps and the integration of production lines consisting of several machines.

The new **morbidelli pwx500** is also extremely **adaptable**: the panel drilling occurs with a FLEX transport and positioning system that automatically adapts to the piece's specifications, with the possibility of positioning the panel in one or more positions along Y axis.

**Effectiveness** is another key word: the panel is machined with **10 drilling units** rapidly completing any furniture installation diagram thanks to the M-type heads and electro-spindle with tool changer.

Lastly, the model can be highly **customised**: over 450 drilling tools can be fitted, 6+6 separate dowel insertion units, two workstations and different servo system levels.

The best tool position on the heads, depending on the client's production batches, is identified by a powerful and innovative optimiser: **Maestro powerset**. This software satisfies a specific demand: facilitating and speeding up the set-up operation of the bits on the machine and providing the plant with flexibility.

### **NEW MAESTRO 3DRILL SOFTWARE**

As well as two new machines, SCM has integrated a new drilling software, **Maestro 3Drill**, to also apply the main advantages of morbidelli numerically controlled programming software to drilling machines.

Some of the main advantages include the possibility of directly importing three-dimensional solids with automatic recognition of the holes to be performed. This speeds up and simplifies the user's programming experience.