

SANDING AND FINISHING SOLUTIONS OUTSTANDING QUALITY, PRODUCTIVITY AND FLEXIBILITY



THE EXCLUSIVITY OF FINISHES THANKS TO THE CARVING UNIT

In order to compete in today's market it is essential to provide one's clients with products that have superior specifications enabling them to manufacture exclusive products. In the furniture sector, quality and aesthetic components require a strategic position to achieve success. DMC has, since its beginning, focused on this target with a continuous research and development aimed to improve products quality for the System range of flexible sanders and it has created a series of **technology innovations**, unique to the industry, enabling customers to produce high quality textures and surface finishes. Recent technologies aimed at texturing solid wood and related materials are some examples of development and research: these new technologies allow users to achieve finishes found in artisan products that will enhance the raw nature of wood by introducing surface textures such as Band Saw Cutting Effect, Worm-Hole Effect and the Carving Effect, longitudinal and transversal Waves Effect, as well as the widest variety of distressing and brushing effects.

The carving unit is **the super advanced technology developed by DMC** (patent requested), a multifunctional solution creating the look of a truly carved surface on solid wood, veneer and MDF, this technology can be applied to many application sectors such as parquet flooring, home furniture and internal wall manufacturing.

Creative ideas for drawing paths and trajectories that follow and overlap each other either uniformly or totally at random, are easily transferred by the user to the product to be processed thanks to the highly flexible working unit. This grants almost the same flexibility as a CNC working center but with lower price and higher productivity.

The innovative carving unit, allows the reproduction on an industrial scale of the artisan finishing effects obtained with a hand scraping tool. This highly in-demand finish emulates manual woodworking processes and provides an authentic and valuable characteristic to wooden furniture.

The system of vertical and transversal tool movements allows users to freely reproduce **unlimited carving effects** that differ in depth, direction and shape of the pattern grooves. Any effect can easily be achieved due to the translation system which is controlled by brushless servomotors, that guarantee fast and precise movements, and the Hydra-PC control that allows for simple and intuitive programming of the machining unit.

For the finishing of cabinet doors or MDF internal walls, the machine is programmed with synchronized movements of the various operating units which grants the reproduction of repetitive trajectories. In this way, real drawings can be realized even with the 3D effect that is much appreciated by the market.

Inside a single machine, the carving units can be paired with abrasive brushes units. It is possible to realize configurations that, in just one step, allows the creation of 3D surfaces, followed by sanding, making the panel ready for painting, laminating, papering or veneering.

The **complete modularity of the System range** allows end users to freely combine machining units to achieve the most varied effects and to replace them **quickly** and **economically** to adapt

the machine composition to market requirements.

The innovative range of DMC “System” sanders has been designed and constructed as a veritable “technological container” capable of housing up to 10 machining units in a single machine, resulting in an extremely advanced solution that can meet even the most complex surface effect requirements.



MAESTRO

THE HIGH LEVEL COMPLETE SOLUTION FOR COATING DOOR AND WINDOW FRAMES

The frame production market demands ever increasing flexibility. The introduction of a versatile, reliable robotised system like **Maestro** from **Superfici** simplifies small batch management. It also guarantees the continuity typical of robotised solutions. Add to this the possibility of fast colour changes with reduced coating wastage, and it is clear how a robotised system is perfectly suited even for production with custom finishes, managing numerous different small orders.

The robot can be used with pneumatic or electrostatic application systems and easily adapts to any coating requirements.

Main benefits of a Maestro anthropomorphic robot spraying line:

- **reduced production times**
- **uniform and continuous application quality**, which is difficult to achieve manually.
- **improved control of product quantity** and, therefore, savings in terms of paint/coating consumption.
- **easy, flexible robot control.**

The spraying robot fits perfectly in coating lines that can, for example, include rotation of workpieces on the conveyor system to allow spraying of both faces, or the use of two opposite robots, where this is justified by the capacity required. The robot is often used in lines complete with drying systems, even sophisticated ones with microwave technology that considerably shorten production cycles, further extending the flexibility of the entire plant.

Maestro, Technology Highlights:

WIDE SPRAYING AREA

The system was specially designed for spraying large items, typically door and window frames. Working area size: 3000 x 3000 mm. If necessary extendable by adding a 7th axis.

KAWASAKI ANTHROPOMORPHIC ROBOT

The Kawasaki high-performance anthropomorphic robot is perfectly integrated in the system, guaranteeing build quality and reliability. The robot has 6 axes, which can be extended up to 11 if necessary.

OPTIMISED SPRAY GUN HOLDER TOOL

The spray gun holder tool is designed for fast gun positioning that is always precise, allowing uniform application in the various areas of the frames to be coated.

PRECISION WORKPIECE SCANNING DEVICE

The frames are scanned using a reading bar, to adapt the movement of the spraying arm accordingly.

FLEXIBLE, USER-FRIENDLY SOFTWARE

The control software easily manages recipes and colour changes: defining distances, angles and spraying speeds is possible for any operator, using an intuitive program interface to save and retrieve the types of processing.



MATRIX LED UV SYSTEMS

THE NEW FRONTIER IN SUPERFICI UV POLYMERISATION

In the sector of development of UV driers towards the use of LED systems in place of conventional lamps, Superfici has devised its own LED UV solutions, with performance perfectly suited to the most innovative UV coating cycles.

Thanks to intensive work with leading coating manufacturers, Superfici has optimised the various systems in its range to meet the applied energy, emission wavelength and efficiency requirements for the different coating products.

LED UV system applications, widespread in particular in the digital printing sector and graphics industry, are now available to use in the coating of wood, partly thanks to the increasingly strong development of suitable coating products at increasingly attractive prices.

Advantages obtainable with LED UV systems:

- **significant energy saving**
- **No more heating the workpiece during processing**, thanks to LED emission, without infrared, allowing considerable benefits in terms of finished product quality, energy savings and lower investment. With LED UV technology there is no need for the expensive workpiece cooling systems that are often necessary above all for heat-sensitive materials
- **No more expensive and noisy extraction systems** because LEDs do not produce ozone gas
- **solves the problem of disposing of mercury UV lamps.**

The Superfici range of solutions includes both low-/medium-powered systems used mainly in pinning stations, and high-powered systems for total polymerisation.

The LED UV system can be used on its own or with hybrid systems in combination with other UV sources.

Such combinations are often an excellent compromise for entering the new era in order to benefit from the major energy saving and reduced temperature build up on the workpiece treated, without having to use expensive, highly specialised chemicals for inks and paints.

Superfici's team of specialists designs modular, customised solutions for every need and application. They use advanced know-how gained concerning every aspect of the LED system, from perfecting cooling devices to control drivers, feed, control software and its graphical interface.

Visit the Superfici laboratory in Monza for tests and demonstrations on LED UV modules.

Find the HR pictures at the following link: www.scmgroup.com/press/xylexpo

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