

dmc topmetal

wet deburring-finishing machine



SOLID



Sturdy main frame for high production capabilities.

Up to 37 kW power for **high deburring**.

MADE IN ITALY



From our **70 years' experience** in the design and manufacturing of machines using flexible abrasives we have developed a new and innovative line of wet surface processing machines for metal.

RELIABLE



Technical and design features ensure a correct functioning and a **long-lasting reliability**.

MODULAR



The wet deburring-finishing machine is featured with modular devices that allow for **very large number of configurations**, from the most versatile and flexible to the most specialized one by type of application.

LEAN



The design, the concept and the general principles for the machine project are inspired by **lean production** to grant the customer a maximized result.

TECHNOLOGICAL



Dmc topmetal, with its advanced technology, comes to the market as a **state-of-the-art deburring and satin-finishing process** solution for high production performance.

18

SOFTWARE

20

TECHNICAL DATA

APPLICATIONS



automotive | aerospace | furnishing | marine



exterior design | medical devices | finishing



Genial.

Reliable.

Efficient.

Adaptable.

Technological solutions.

GREAT machines for metal processing.

TECHNOLOGICAL FEATURES

TECHNOLOGICAL ADVANTAGES

WET DEBURRING-FINISHING MACHINE

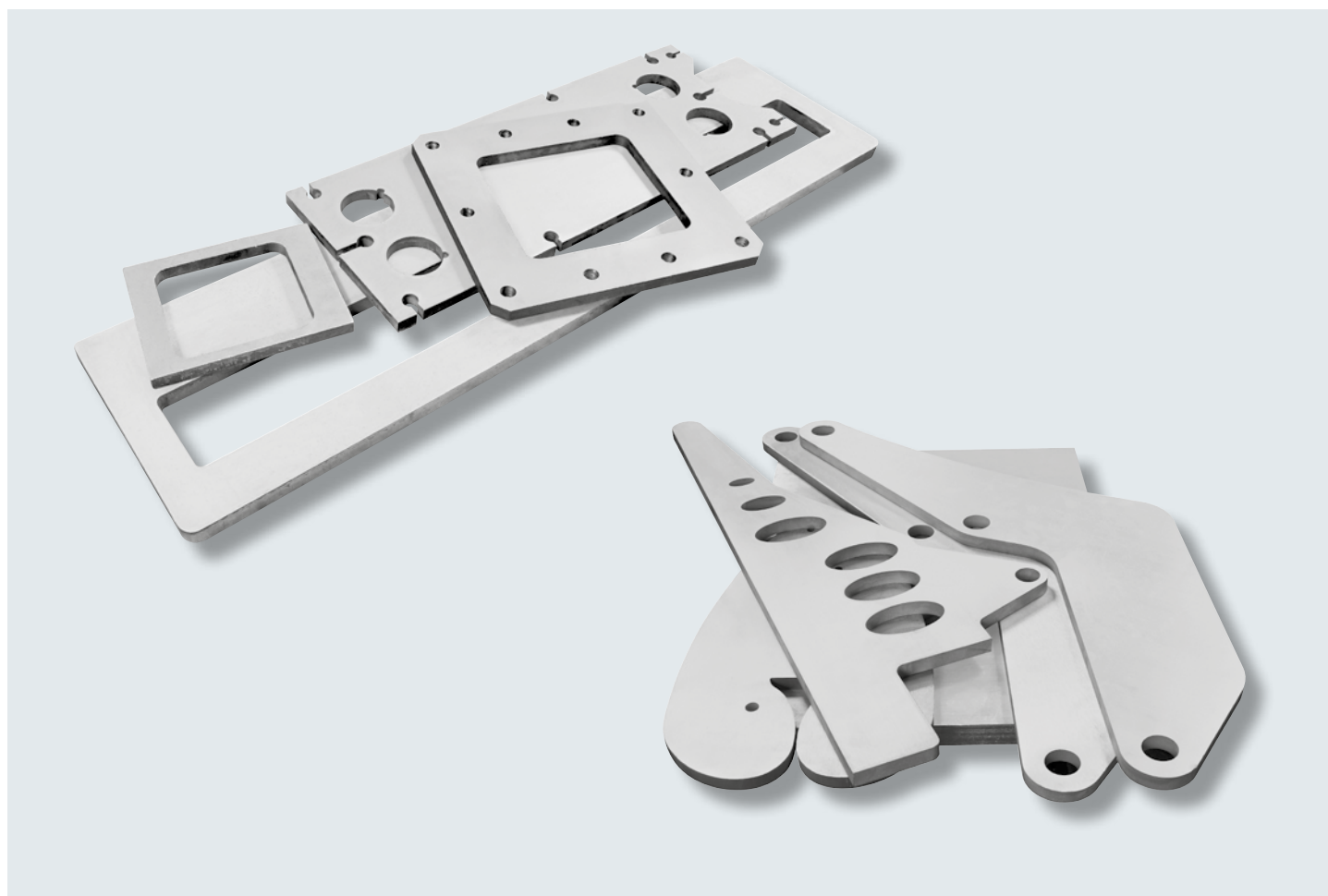
Dmc topmetal is designed to meet all deburring and satinizing demands, including heavy-duty machining. Wet processing is ideal for customers requiring very high quality finishes such as preparation of surfaces for mechanical polishing, chrome-plating and other galvanising processes.

- Powerful and reliable mechanics
- Latest generation technology
- Easy and safe to use



KEY BENEFITS

- + **Edge rounding:** exclusive planetary unit using gears, with disc brush rotation speed independent from the speed of the head, for a more effective deburring and edge rounding even on plates larger than 1 meter.
- + **Up to 25% more productivity:** contact rollers up to 320 mm diameter for a larger contact surface and damping of abrasive belt junction to guarantee a 25% higher productivity than smaller contact rollers.
- + **The best finishing for uniformity and quality:** batteries of 25 nozzles located before and after every working unit for a proper cleaning and cooling of the working area with consequent surface finishes up to P2000 grit and greater lifetime of abrasive belts.
- + **Adaptive cycle - positioning at 0.01 mm pitch:** electronic adjustment of the operating units is achieved with brushless motors, managed by the machine PLC control, for fast and precise positioning with reliability over time, based on abrasive belt consumption.



OPERATING UNITS

CONTACT ROLLER UNIT

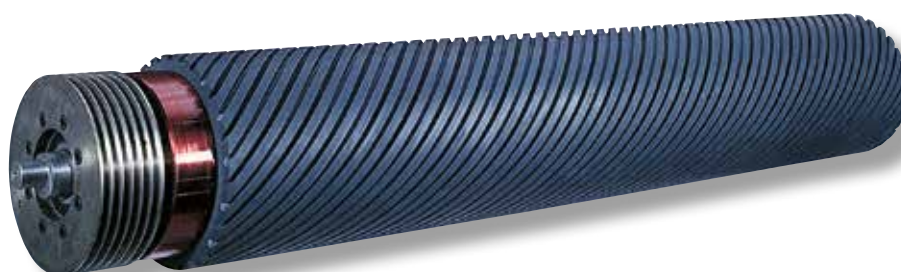


SOLUTION DESIGNED TO LAST OVER TIME AND ENSURE MAXIMUM RETURN ON INVESTMENT

Designed to meet all wet deburring and satin finishing processes even under the most heavy-duty machining conditions, dmc topmetal requires minimum maintenance. A dedicated solution for customer seeking superior finishes, ideal for surface preparation for mechanical polishing, chrome-plating, and the most demanding galvanic treatments.

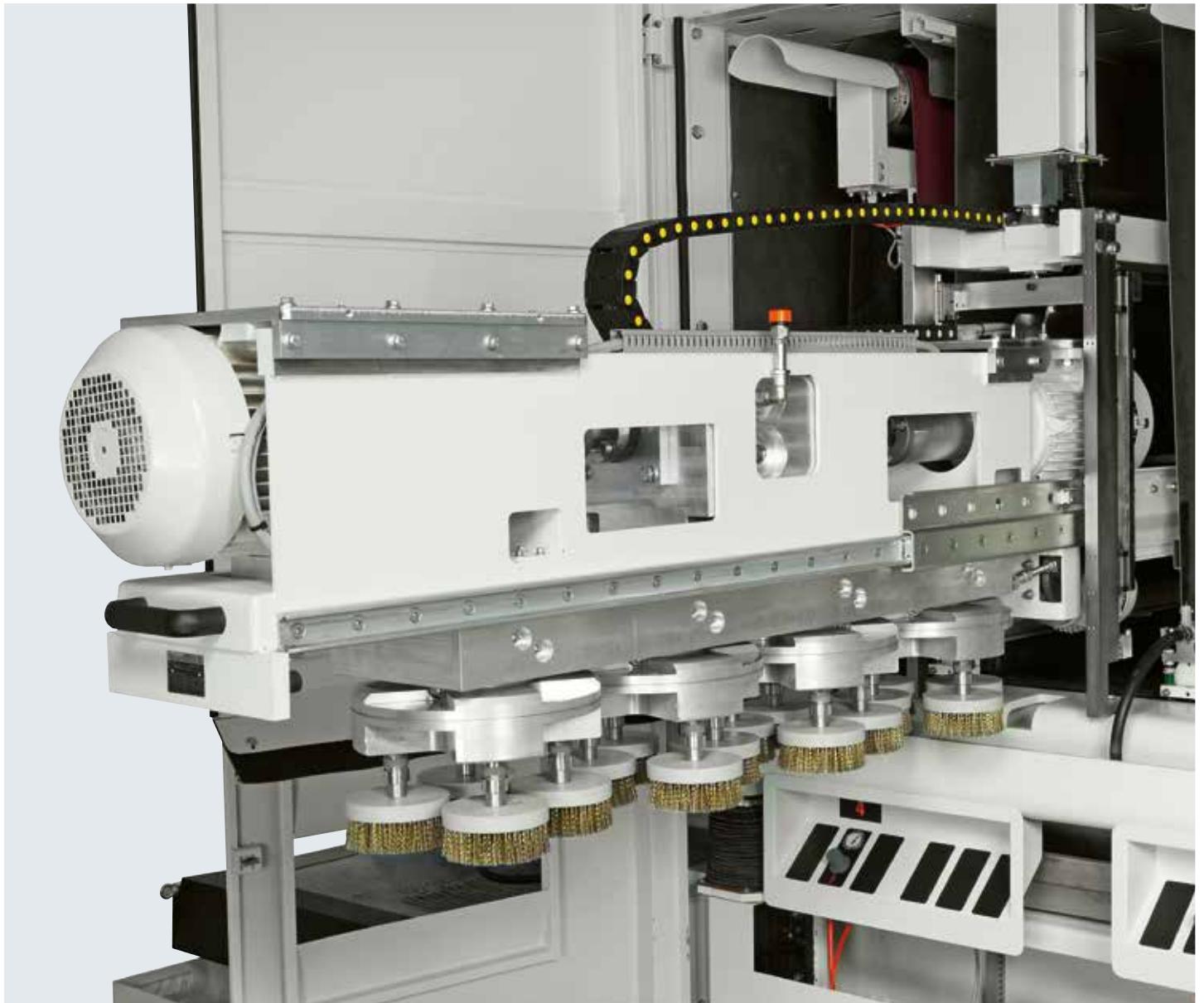


Dmc topmetal contact rollers are available with a diameter of 250 mm or 320 mm. The latter, thanks to the larger contact surface with the workpiece being processed and greater ability to absorb any defects on the abrasive belt joint, are specifically indicated for all applications requiring very high quality finishes. The contact rollers are available in bare steel or with an oil and heat resistant rubber coating (with hardness from 20 to 85 shores). They are also fitted with a special helicoidal grooving, optimised to ensure proper cooling and to improve ejection of machining debris.



OPERATING UNITS

PLANETARY UNIT



PLANETARY UNIT

The innovative planetary unit is designed **to meet the most complex demands when deburring and rounding edges**. Fitted with special brushes, the unit can also be used to obtain original types of surface finish on sheet metal. The movements of the unit (brush rotation, brush holder disc rotation and head sideways movement) are managed by separate motors, all controlled by inverters.

Therefore you can choose the most suitable speed combination depending on the specific type of operation required.



The **quick coupling system** for the brush disks, long tested, enables quick setup of the machine and at the same time provides maximum reliability and safety of the locking mechanism.



PRECISION MECHANICS

Drive transmission is achieved using mechanical gears only, without the use of belts, to ensure maximum efficiency and reliability even during heavy-duty deburring operations.

STANDARD DEVICES



COOLING LIQUID RECYCLING AND FILTERING SYSTEM

To ensure separation of metal debris and recycling of the cooling liquid, dmc topmetal uses a TNT filter with an automatic reel unwinding system. Alternative types of filters are available for machines intended for more intensive uses.

Dmc topmetal is also fitted with a safety cartridge filter to prevent processing waste from being accidentally placed back into circulation. This would damage the finish of the workpieces and compromise the efficiency of the nozzles. Two pressure gauges, one on the inlet and one on the outlet of filter, enable efficient monitoring of the condition of the cartridge.



WORKPIECE CLEANING AND PRE-DRYING UNIT

Dmc topmetal is fitted with a unit in the outfeed area to clean and predry the workpieces. The device consists of a set of nozzles for washing with emulsion, a twin pair of motorized rubber squeezing rollers and an air knife system powered by an electroventilator positioned on the top of the machine. For specific drying requirements, the system can be fitted with heater for the air flow.

STANDRD DEVICES



ELECTRONIC ADJUSTMENT OF THE OPERATING UNITS

Electronic adjustment of the operating units is achieved with linear stepper motors, managed by the machine control PLC via CAN BUS connection. This solution ensures **fast and precise positioning of the working units** with constant reliability over time.

ABRASIVE BELT CENTRING SYSTEM

Mechanically controlled by a ceramic covered probe, that works in proximity with the abrasive belt. This device **allows for continuous centring of any kind of abrasive sanding or cloth belt with thickness up to 5 mm**, while guaranteeing a specific lifespan in an environment featuring water/oil emulsion.



COOLING SYSTEM

The cooling liquid is released from the special batteries of nozzles located in the infeed and outfeed areas of every operator unit. The system is optimised to ensure proper cleaning and cooling of the processing area. **This means better quality finishes and greater durability of the abrasive belts.**

STANDRD DEVICES



STAINLESS STEEL TANK

The stainless steel tank, located under the worktable, collects the used cooling liquid and conveys it towards the filter unit. The special design of the tank **prevents any loss of the liquid which may affect correct machine functioning.**

AIR FILTERING UNIT

The air filtering unit located on top of the machine separates the metal particles from the oil mist produced during the processing cycle and enables recycling of the emulsified cooling liquid. This device is **essential to ensure suitable health and safety conditions in the working environment**.



MAXIMUM FUNCTIONALITY

All the electronic and pneumatic components on DMC Topmetal are located very rationally to ensure maximum ease of access and prevent at the same time any possibility of contact with the cooling liquid.



Maestro active sand

Maestro active is the new operator interface software which has been unified across all SCM technologies. A single operator can easily and confidently run multiple machines due to controller and interface consistency: regardless the machine, Maestro active maintains the same look&feel, with many identical icons and navigation buttons, thus ensuring the same approach to interaction.

EASE OF USE

The new interface has been specifically designed and optimized for immediate use via touch screen. Graphics have been redesigned for simple and comfortable navigation, with tablet-like icons on touch screen controller.

“ZERO” ERRORS

Improved productivity thanks to guided procedures that reduce the possibility of error from the operator's side.

SOFTWARE

Factory

Maestro active sand

Maestro active sand is the innovative software interface specifically designed for automatic dry deburring-finishing machine.

FULL CONTROL OF PRODUCTION PERFORMANCES

The creation of customizable reports by operator, shift, program, forecast period (and much more) allows to monitor, optimize and improve the production performance

ADVANCED PRODUCTION ORGANIZATION

Maestro active sand allows to create different users with different roles and authorizations depending on the machine's use (e.g.: operator, maintainer, administrator, ...), to detect activities, productivity and events that occurred in each shift.

TOTAL QUALITY OF THE FINISHED PRODUCT

With Maestro active sand the quality of the finished piece is no longer put at risk by abrasive belts wear. New tool store management function **enables to execute the inventory** of all the tools available on the store, **to register the belts** and **to automatically prepare bar chart reports to control their status** and to alert the operator when they have to be replaced.

EASY TO USE

Main functions:

- Tool store management
- It indicates the quantity per type of belts and automatically warns when they are running out
- Barcode management: reading of customer's barcode and automatic association of the working programme and working thickness to be used
- Creation of programs for each individual part
- Machine status management
- Following Industry 4.0 principles

MACHINE CONTROLS

dmc topmetal
wet deburring-finishing machine



EYE-S CONTROL PANEL: EASILY AVOIDING MISTAKES

Simple and intuitive control panel with 15" touchscreen and **Maestro active HMI**, to improve dry deburring-finishing machine experience. It allows the machine to be managed in manual mode or with working programs that can be configured by the operator.

"eye-S" includes **new features enabling proper management and costs reduction** of the abrasive tools.

The possibility to store **up to 999 work programs** to recall the most frequently used machine settings makes it **ideal even for less experienced users**.



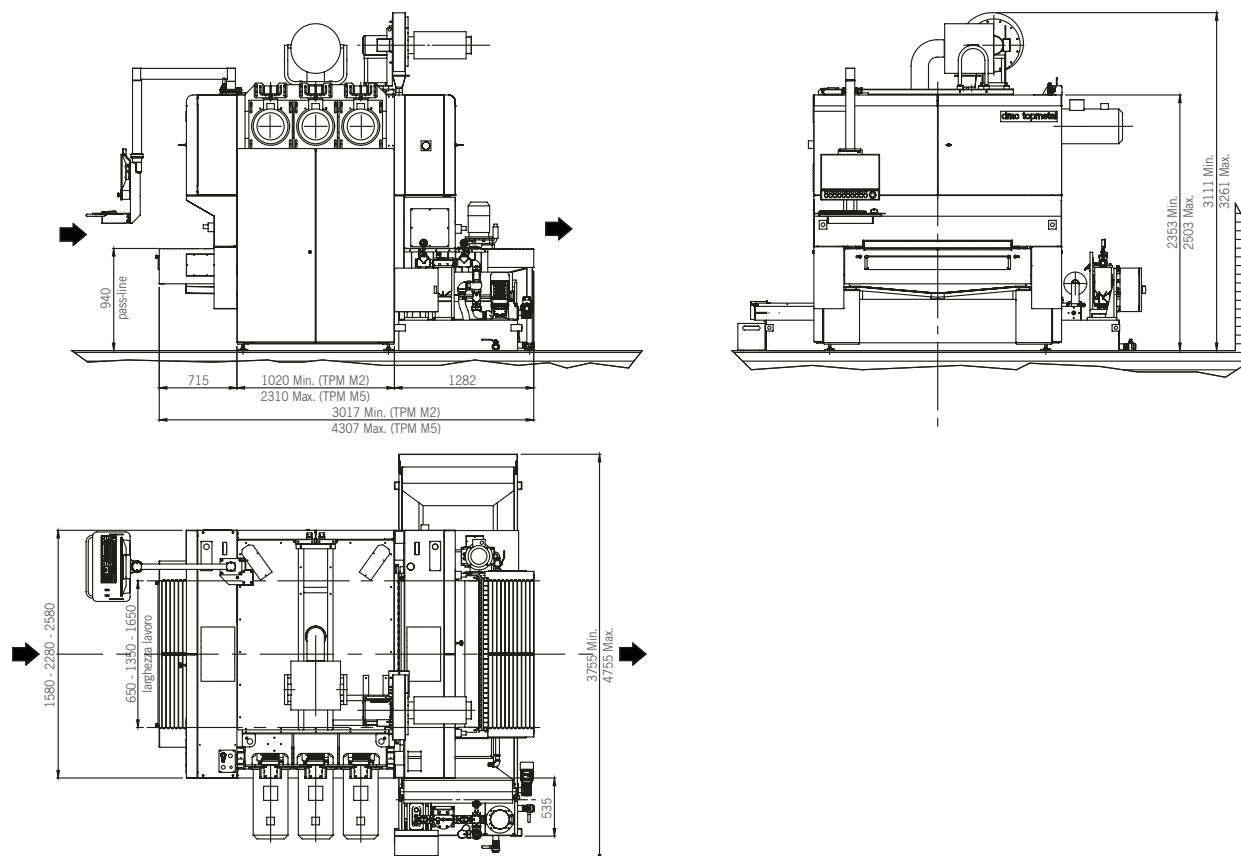
EYE-M CONTROL PANEL WITH MAESTRO ACTIVE SAND ELECTRONIC CONTROL

The "Maestro active sand" control allows you to set all the machining parameters from the "eye-M" console with 24" touch screen and **to check the correct operation** of the machine in real time. The powerful industrial PC with an **extremely simple and reliable user interface** can perfectly meet the requirements of even the most demanding operators (opt.).

OVERALL DIMENSIONS

TECHNICAL DATA





DMC TOPMETAL

MODEL		650	1350
Number of operating units	mm	2 ÷ 5	2 ÷ 5
Working width	mm	650	1350
Min / max standard working thickness (fixed worktable)	mm	0,5 ÷ 150	0,5 ÷ 150
Sanding belt dimensions	mm	670 ÷ 2620	1370 ÷ 2620
Fixed height of worktable from the ground	mm	900	900
Conveyor belt speed	m/min	1 ÷ 8	1 ÷ 8
Motor power available	kW	22	37



The technical data can vary according to the requested machine composition. In this catalogue, machines are shown with options. The company reserves the right to modify technical specifications without prior notice; the modifications do not influence the safety foreseen by the CE Norms.

Maximum noise levels measured according to the operating conditions established by EN 1870-13:2012
Acoustic pressure in process 89 dbA (measured according to EN ISO 11202:2010, uncertainty K = 4 dB) .
Acoustic power in process 103 dbA (measured according to EN ISO 3746:2010, uncertainty K = 4 dB)

Even if there is a correlation between above mentioned "conventional" noise emission values and average levels of personal exposure over eight hours of operators, these last also depend on the real operating conditions, duration of exposure, acoustic conditions of the working environment and presence of further noise sources, this means the number of machines and other adjacent processes.



SCM OFFERS A FULL RANGE OF **HIGHLY SPECIALISED SERVICES** WITH A QUALITY AND RELIABILITY THAT STEM FROM 70 YEARS OF EXPERIENCE IN THE INDUSTRY.

From installation and production start-up to services and maintenance. From training to the supply of specific original spare parts: **we provide solutions designed around you!**

 SERVICE AND MAINTENANCE • Remote support • Scheduled maintenance contracts • Warranty extension	 TRAINING SERVICE • Courses for machine operators • Software and programming courses • Training in production start-up
 SPARE PARTS • Recommended spare parts list • E-shop • Interactive spare-parts catalogues • Repairs on electronic parts, glue tanks and electro-spindles	 DIGITAL SERVICES • Maestro Connect - IoT platform to be constantly connected with your machines • Smartech - assistance with augmented reality • My Scm portal - opening of service ticket and single point of access to the apps and Services tools

CONTACT

SCM SERVICE

via Emilia 77 - 47921 Rimini - Italy
tel. +39 0541 700100
scmservice@scmgroup.com
www.scmwood.com

SCM SPAREPARTS

Via Emilia, 61 - 47921 - Rimini - Italy
tel. +39 0541 674111
spareparts@scmgroup.com
www.scmwood.com

My Scm



SOLUTIONS AND SERVICES ALWAYS CONNECTED FOR YOU

SCM, A STRATEGIC PARTNER, BY YOUR SIDE AT EACH STAGE OF YOUR BUSINESS PROCESS

SCM has always stood alongside companies in the woodworking sector, with **technological solutions and services which are constantly connected to maximise the machine's efficiency, improve product quality and reduce operating costs.**

70+ years history

3 main production sites in Italy

300.000 square metres of production space

20.000 machines manufactured per year

90% export

20+ foreign branches

400 agents and dealers

500 support technicians

500 registered patents

SCM GROUP, THE MOST ADVANCED SKILLS AND KNOW-HOW IN THE FIELDS OF MACHINERY AND INDUSTRIAL COMPONENTS OVER THE LAST 70 YEARS

INDUSTRIAL MACHINERY

Stand-alone machines, integrated systems and services dedicated to processing a wide range of materials.



Woodworking
technology



Composite,
aluminium, plastic,
glass, stone, metal
technology



Technologies for the
profiles processing of
aluminium, PVC and
light alloy



Automated
systems for
industry



Electrospindles
and technological
components



Electrical
panels



Metalworking
and mechanical
machining



Cast iron



SCM GROUP SPA

via Casale 450 - 47826 Villa Verucchio, Rimini - Italy

tel. +39 0541 674111

scm@scmgroup.com

www.scmwood.com