

dmc topmetal

Wet deburring-finishing machine



CMS is part of SCM Group, a technological world leader in processing a wide range of materials: wood, plastic, glass, stone, metal and composites. The Group companies, operating throughout the world, are reliable partners of leading manufacturing industries in various market sectors, including the furniture, construction, automotive, aerospace, ship-building and plastic processing industries. SCM Group coordinates, supports and develops a system of industrial excellence in 3 large highly specialized production centres employing more than 4,000 workers and operating in all 5 continents. SCM Group: the most advanced skills and know-how in the fields of industrial machinery and components..

CMS SpA manufactures machinery and systems for the machining of composite materials, carbon fibre, aluminium, light alloys, plastic, glass, stone and metals. It was established in 1969 by Mr Pietro Aceti with the aim of offering customized and state-of-the-art solutions, based on the in-depth understanding of the customer's production needs. Significant technological innovations, originating from substantial investments in research and development and take-overs of premium companies, have enabled constant growth in the various sectors of reference.



CMS Metal Technology is the brand dedicated to the production of metalworking machines and technical articles offering a wide range of complete water-jet cutting systems, pressure intensifiers and dry or wet deburring and satin finishing machines. Since the 90's, thanks to the acquisition of Tecnocut and constant internal developments, **CMS Metal Technology** has been able to gain high international prestige, boasting more than 1,500 installations worldwide. CMS Metal Technology is the reliable partner of leading industries in various sectors such as automotive, aerospace, machining, furniture and industrial architecture.



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APPLICATIONS



automotive | aerospace | furnishing | marine



exterior design | medical devices | finishing

Genial.

Reliable.

Efficient.

Adaptable.

Technological solutions.

GREAT machines for metal processing.

Wet deburring-finishing machine

DMC TOPMETAL

TECHNOLOGICAL BENEFITS

WET DEBURRING-FINISHING MACHINE

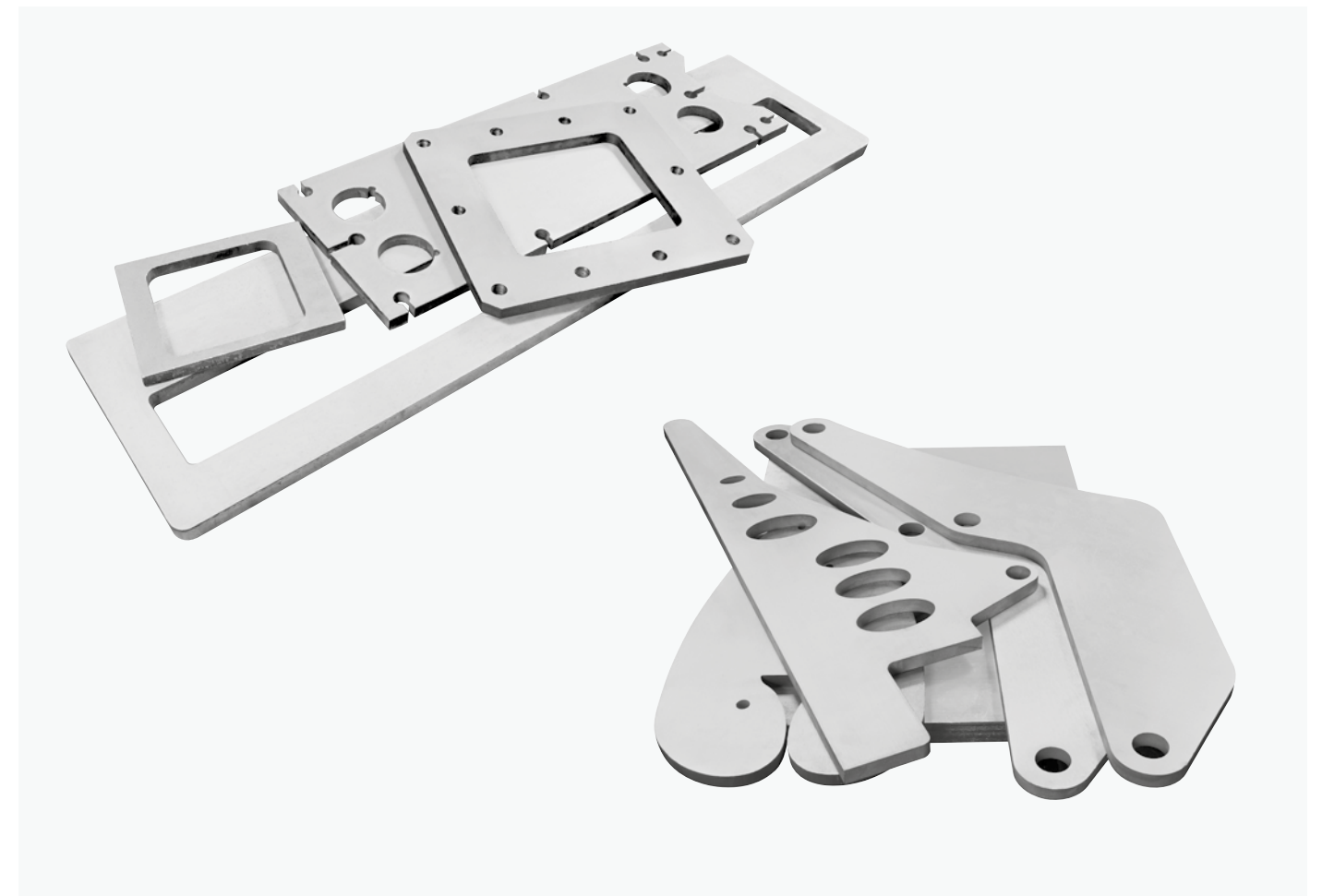
Dmc Topmetal is designed to meet all deburring and satinizing demands, including heavy-duty machining. Wet processing is ideal for customers requiring very high quality finishes such as preparation of surfaces for mechanical polishing, chrome-plating and other galvanising processes.

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



KEY BUYER BENEFITS

- + **Wide radius: up to 2 mm 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 up to 2 mm 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.
- + **Shine finishing: 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: this means 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.



DMC TOPMETAL

CONTACT ROLLER UNITS



INNOVATIVE DESIGN FOR EXCELLENT PRODUCTION PERFORMANCE

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.



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.



DMC TOPMETAL

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.

DMC TOPMETAL

COOLING LIQUID RECYCLING



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..

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.



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.

DMC TOPMETAL

ACCESSORIES



Electronic adjustment of the operating units is achieved with linear stepper motors, managed by the machine control PLC via CAN BUS connection. This is the best solution to ensure fast and precise positioning of units with 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.



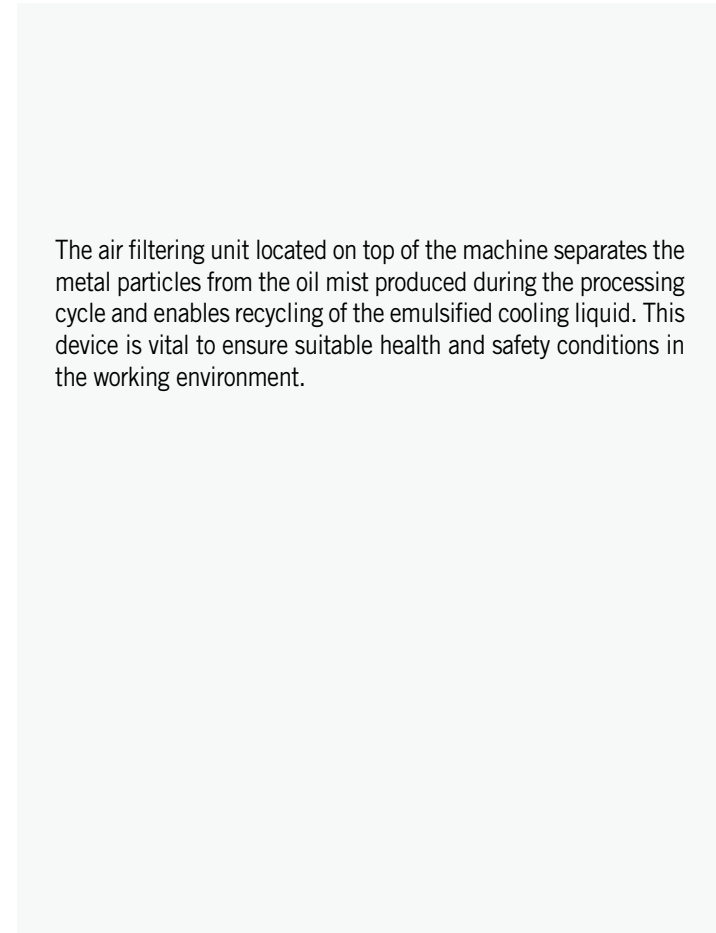
The cooling liquid is emitted from the special batteries of nozzles located in the infeed and outfeed areas of every operator unit. The system is optimised to ensure proper cleaning and cooling of the processing area. This means better quality finishes and greater durability of the abrasive belts.

DMC TOPMETAL

ACCESSORIES



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.



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 vital to ensure suitable health and safety conditions in the working environment.



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.

DMC TOPMETAL SOFTWARE

All the machine management software is proprietary, developed specifically by CMS engineers and perfected with feedback provided by its customers. The result is an extremely simple and reliable user interface, able to perfectly fulfill the requirements of the most demanding operators.

HYDRA CONTROL MAIN FEATURES:

- Management of working thickness
- Speed management of conveyor belt, abrasive belts and brushes rotation
- Working height adjustment of the disc units
- Cascade automatic starting of main motors
- Timed activation of cleaning blowers for abrasive belts and unloaded workpieces
- Operational report (working hours / running hours)
- Machine trouble-shooting and fault diagnosis of the electronic boards
- Histograms graphics for tracking abrasive belt wear (opt)

HYDRA V-PAD CONTROL PANEL, STANDARD DEVICE ON THE MACHINE:

The Hydra V-Pad control is used to set all the operating parameters on the touch screen.

Features:

- 10.4" touch-screen display
- 120 configurable working programs by the operator
- real time monitoring of correct machine operation



DMC Topmetal can be supplied with a control panel on board or a separate electric cabinet. The former reduces the overall dimensions of the machine to a minimum, whereas the latter facilitates placing of the machine in line processes, with automatic workpiece handling. Suitable isolation of electronic components is ensured in both cases.

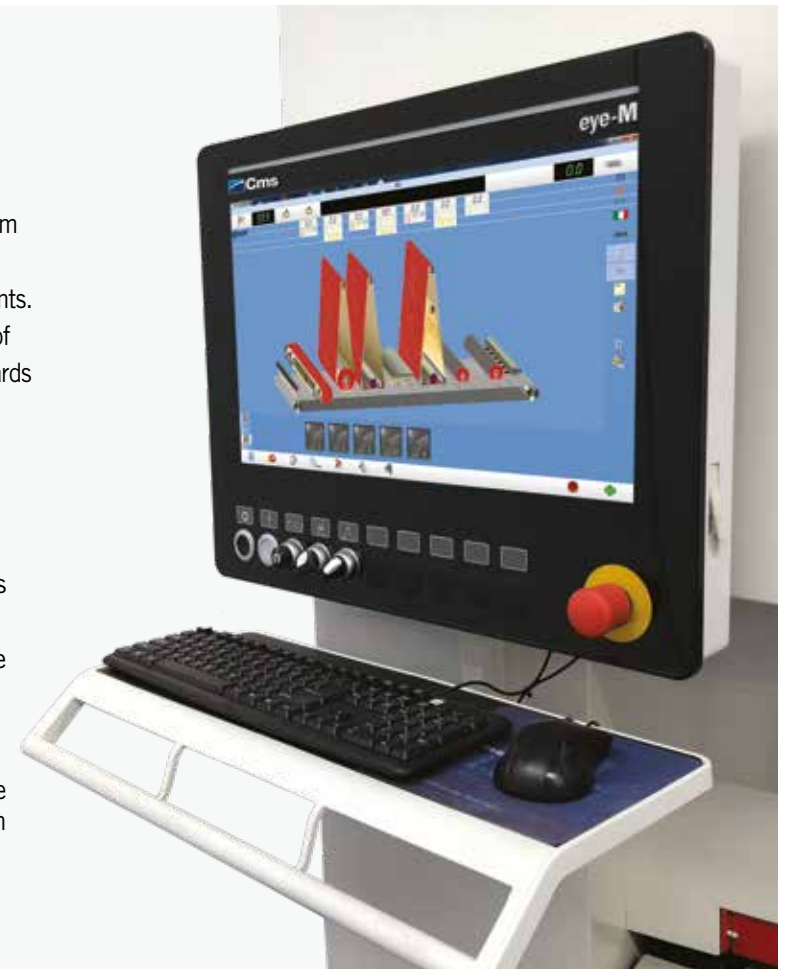
CONSOLE WITH INTEGRATED PC "EYE-M" AND HYDRA-PC MONITORING (OPTION)

Device connected to the machine with adjustable gluing arm and fitted with fanless Industrial PC (PC Panel) and IP53 protection rating to withstand the more onerous environments. The 21.5" touch colour display ensures advanced control of the machine parameters and a simplified interfacing outwards thanks to a LAN network connection..

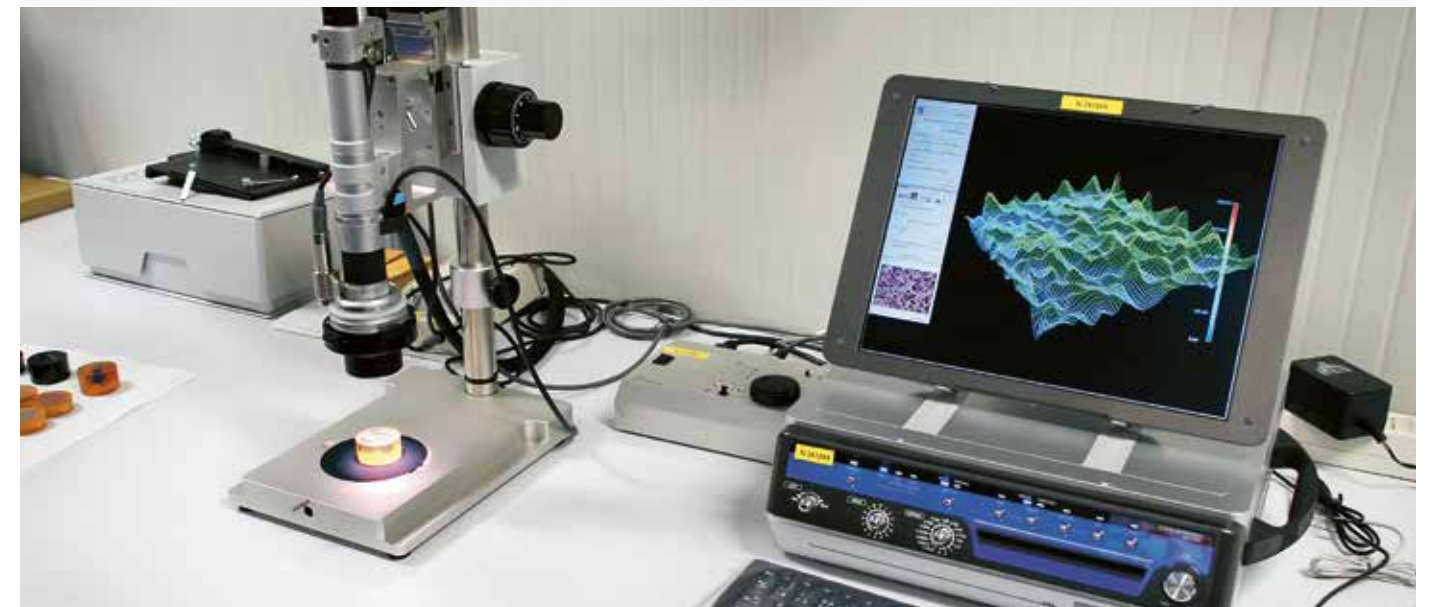
KEY SPECIFICATIONS:

- storage of up to 1999 work programs
- production report
- Machine alarms management and fault diagnosis with integrated manual for easy identification
- integrated digital instructions and maintenance manual
- LAN network connection.

In conjunction with the remote customer service, the device offers an industrial and advanced solution in line with industry 4.0 technological requirements.

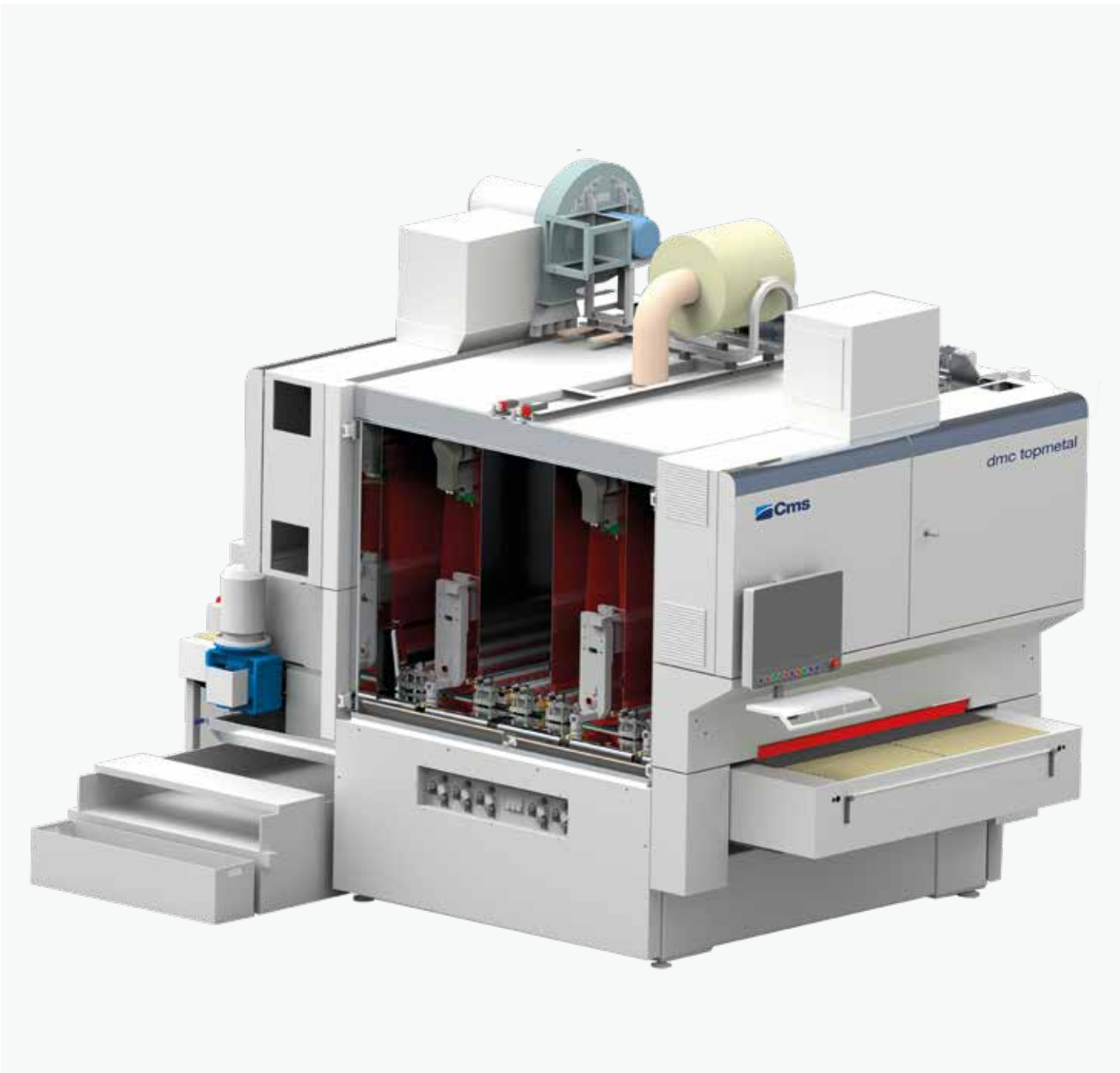


Excellent structure designed to carry out research on abrasive materials and materials processed by flexible abrasive machines, but also for finishings on innovative materials like Corian®, inert materials, quartz, polyurethanes, mineral wools, and fibre-cement etc. The operating unit is run by highly qualified personnel and is equipped with sophisticated instruments for capable of analysing the materials to be processed and the various types of abrasive. Thanks to the numerous demonstration machines, it can carry out any process testing to rapidly provide customers with detailed information on the best way to tackle any problem concerning a process in which a flexible abrasive machine is used, and achieve the new finishes requested by the market.



DMC TOPMETAL

TECHNICAL DATA



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

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.

THE RANGE OF CMS METAL TECHNOLOGY

FOR METAL AND TECHNICAL ARTICLES PROCESSING

WATERJET CUTTING MACHINES



TECNO CUT SMARTLINE



TECNO CUT PROLINE



TECNO CUT AQUATEC



TECNO CUT WATERSPEEDY S

PRESSURE INTENSIFIERS



TECNO CUT EASYPUMP



TECNO CUT JETPOWER EVO



TECNO CUT GREENJET EVO

DRY DEBURRING-FINISHING MACHINES



DMC M950



DMC EUROSYSTEM



DMC METALSYSTEM

WET DEBURRING-FINISHING MACHINES



DMC M950 WET



DMC TOP METAL



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