

ITALIAN MACHINE TOOLS, ROBOTICS & AUTOMATION INDUSTRY ~ NEWS

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PIATTAFORMA INDIA PROJECT

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UCIMU-SISTEMI PER PRODURRE



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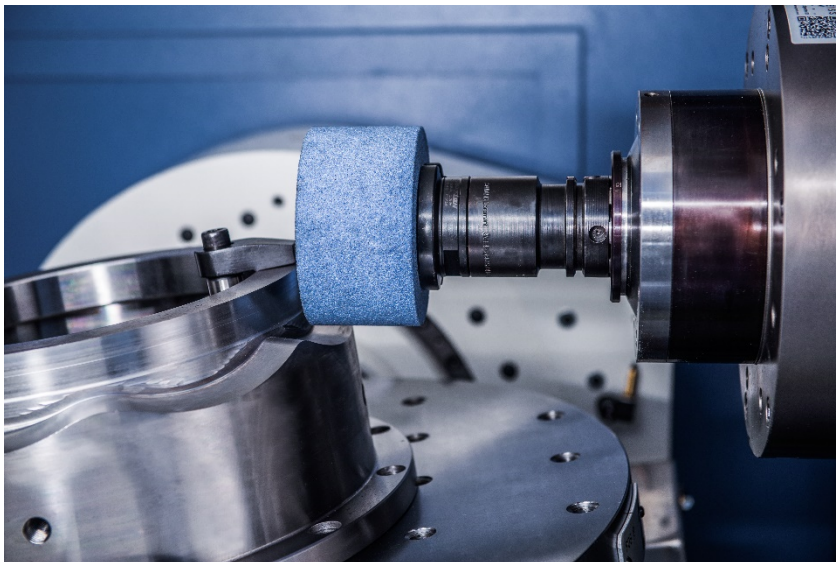
CLOCK EVO LINE

MCM is an Italian technology leader in the design, manufacture and supply of flexible production lines and innovative process solutions. As proof of this statement, the company boasts many important references all over the world. This leading position is the result of the constant attention that MCM has paid to small and medium-sized enterprises since its origins. Diversification in the various market segments has been a driving force of continuous and virtuous innovation for MCM, and still today the small and medium Italian industry represents an important share of the company's business. Small subcontractors and large OEMs recognise MCM know-how, now branched out into a wide and structured range, which allows to offer advanced, high-performance and reliable solutions for every production need.



Historically, the range of MCM horizontal machining centres is based on the CLOCK line, which has always been constantly evolving to adapt to the increasingly challenging demands of the markets. For this reason, during this 2020, the Clock range has been renewed with cutting-edge solutions and ergonomic design. The market launch of the Clock *Evolution* line is scheduled for October 2020, with the presentation of Clock 800 *EVO* model, featuring cubic working area (X, Y, Z strokes of 800 mm), pallets up to 500x630 mm and a wide range of spindles from 8,000 to 30,000 rpm.

The Clock *Evolution* line covers machining volumes between 512 dm³ and 1320 dm³, combining high dynamics, rigidity, precision and flexibility. The models differ from each other in the volume of the working area, but all guarantee optimal dynamic and mechanical characteristics, as well as absolute maintenance of geometry over time. The rigidity is extremely high thanks to the double-plane base, the linear recirculating ball guides and the careful design with dynamic and static test of the structures using FEM software. The machine kinematics includes the transversal movement upright (X) and longitudinal movement workpiece support table (Z). As for all MCM machines, the cast iron structure consists of the two main blocks (base, carriage) and the Y-axis column. The tilted position of X-axis guides provides absolute structural rigidity even under significant mechanical stress.



To these rewarding features, always present in Clock machines, the recent restyling paid a great deal of attention mainly to ergonomics, functionality, and also aesthetics. The design of the new Clocks includes the optimisation of the overall dimensions on the floor and the reduction of the overall space taken up by the machine - an increasingly important request from all customers. The machine has been redesigned in its entirety to facilitate and speed up both installation and maintenance, all aimed at ensuring a reduction in machine downtime and greater functional efficiency. Important developments have also been implemented in terms of ease of use. Integrated control areas and new ergonomic push-button panels with touch screen give the Clocks a modern look and advanced functions, allowing a new approach to the principles of interaction between human and machine. The line of bodywork and external guards has been revised both in terms of aesthetic improvement and practical content. The interventions have not changed the flexibility of the layout configurations, the machines remain available in 'right' or 'left' version, with compact roof-mounted or modular floor-mounted tool magazines, with capacity up to 500 tool places on single machine with ISO/MAS 40 or 50, HSK-A63 or A100 systems. In case of FMS, the Mirror version includes the modular magazine shared between two machines to optimise tool management.



Clock EVO maintains all the excellent construction features of each MCM machine, with absolute direct measuring systems (pressurised optical scales and encoders) and a refined design and manufacturing thermal symmetry. Thanks to the exclusive mechanical technologies adopted, performance has also improved in terms of pallet management times and multiprocess machining phases (e.g. milling and turning).

Clock EVO allows high removal or high cutting speed machining with no compromise, thanks to the wide range of MCM-design spindles (up to 65 kW and 690 Nm) with variable bearing preload automatically controlled by the CNC according to the type of machining to be performed, set by means of M function in the workpiece program (e.g. roughing or finishing).

Like all MCM machining centres, EVO Clocks are available with 4 or 5 axes and multitasking, capable of combining milling, turning, grinding and power skiving operations in the same centre.

The Multitasking version will feature a new tilting rotary table equipped with high-speed bearing that allows turning operations up to 1200 rpm. If the option for use of abrasive tools is provided, a grinding wheel dresser system is available inside the working area.

The flexibility features allow integration with most automation systems.

Widely configurable and at the forefront of smart manufacturing and Industry 4.0 principles, Clock EVO has a complete digital equipment.

Sensors, power consumption load monitoring system and the new module named < jNode-FR> for data collection and analysis directly on board the machine are standard, as required by the latest digital factory principles. The machines are ready for the optional software suites < jFMX> and < jFRX>, available as complement.

With Clock EVO comes a strategic solution for all the needs of the main production sectors: automotive, aerospace, energy, defence and general mechanics. In Italy as well as abroad, it is the new point of reference for automation and competitiveness in small and medium-sized high performance machining.

www.mcmspa.it/?ISite=en

The project Piattaforma India has been promoted by UCIMU – Association of Italian Machine Tools Manufacturers and AMAPLAST – Italian Plastics and Rubber Processing Machinery and Moulds Manufacturers Association. The two associations agreed on the idea that promoting a network of associations and entrepreneurs who have developed knowledge and experience on the Indian market, can be useful in favoring of new paths of development for business. The Indian companies who are interested to form JV, cooperation, technical tie up, purchase machinery etc from/with Italian companies can contact below mentioned address for any assistance:

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