

ITALIAN MACHINE TOOLS, ROBOTICS & AUTOMATION INDUSTRY ~ NEWS

May 2023

PIATTAFORMA INDIA PROJECT

NEWSLETTER NO. 79



UCIMU-SISTEMI PER PRODURRE



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SIEMENS



SIEMENS AND MANDELLI A SUCCESSFUL PARTNERSHIP, LOOK TO THE FUTURE OF DIGITALIZATION AND SUSTAINABILITY

SIEMENS has always been a pioneer in all areas of technologies, first developing and then testing in its own production sites, **Software** and Hardware, without ever losing sight of **SUSTAINABILITY**.

The latest SIEMENS CNC “SINUMERIK ONE” and its digital native, is the confirmation that SIEMENS is at the forefront of digitalization. Thanks to a calculation speed 10 times faster than the previous model, the software part dedicated to creating the digital twin of the machine tool, offering 8 different levels of digital twin, 4 for machine builders with “**Create myVirtual Machine**” software” and 4 for the end users with “**Run myVirtual Machine**” software, SIEMENS has a complete and modular range capable of satisfy all demands in the machine tool market.



The digital benefits of the machine builders are very important, in addition to engineering the machine remotely, the PLC, the Safety’s program machine data, cycles, operative surface and simulation, can be carried out in parallel by all engineers simultaneously, **forgetting** the old serial approach, which involved finishing one process and starting the next.

On the end-user’s side, digital benefits are equally important; as testing of part program in the office before, checking the eventual collisions between tool and workpiece, getting information on the work schedule, to know the complete tool list required for the part program of the machine, 3D drawing and all the information needed to safely complete the machining, as everything has been tested in the technical office on the digital twin of the machine actually on the shop floor.

Finally, sustainability must be included in every products, the latest CNC SINUMERIK ONE includes 8 customizable energy-saving menus through CTRL+E functions, e.g., during coffee breaks, lunch breaks or other periods of machine inactivity, many complementary devices can be deactivated for greater energy savings.

In this monthly newsletter it is also mandatory to talk about **MANDELLI**, a historic company with cutting-edge technologies that also has **Siemens** as a partner, from the beginning of its born.

MANDELLI was established in 1932 in Piacenza, founded by Renato Mandelli. The corporate form of the foundation is an Individual Company, designed for the precision machining of mechanical parts.



Since 2021 **MANDELLI**, has been part of the **Allied International Group**

MANDELLI is reorganizing its structure thinking primarily of renewing the range of his machining centers. The recent acquisition by the new group is laying the foundations and putting in field the resources needed to develop a model of business that sees a renewal of product aimed at all sectors of mechanics and not more only to niche applications.

MANDELLI grows and over time becomes a benchmark in the mechanical automation market deals with the design and production of high-tech machine tools for the **AUTOMOTIVE, AEROSPACE, OIL&GAS** and **ENERGY**

The Allied Group's philosophy has always been based on three main factors: very high precision, reliability and reliability of precision over time.

MANDELLI offers a wide range of products, some standard solutions some more customized solutions among which:

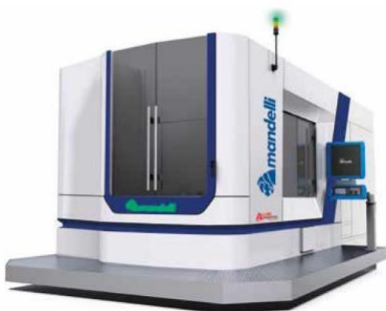
Spark Ti Series Machine

Spark Ti line machining centers who are looking for extreme performance in machining hard materials with particular attention to titanium alloys used in the aerospace industry. Spark Ti is the essence of the technique, guarantees maximum efficiency in heavy roughing and accurate finishing with 5 continuous axes.

Patented damping elements, high torque spindles, pressure and flow of cooling lubricant up to 350 bar in turning, revised linear axis kinematics to increase the available thrust are the features that allow Spark Titanium to excel in the processing of components in tough materials

Spark X Series Machine

Spark X Series, is the result of **MANDELLI** optimization of Spark architecture. It has been conceived to extend multitasking operations to small/medium size workpieces from 1.200 mm swing up to 3.500 mm. It provides excellent performances such as dynamics, stock removal and accuracy and it can be configured to machine traditional materials such as cast iron and steel as well as light alloys and hard materials.



HS50 NEW MACHINE

The line of **MANDELLI** machining centers is enriched with a new model, HS50. Born to guarantee flexibility, high performance and integration of various cutting-edge technologies, the new born of Casa **MANDELLI** was born as solution capable of performing in a single work center in addition to milling operations also the operations of turning with performance at the same level of traditional systems designed individually for each operation.

Conceived for high-speed machining, HS50 fits in fully in Mandelli's leading sectors such as Aerospace to work structural parts of aircraft, the Oil&Gas for work valves, flanges, impellers and compressors and many parts of precision mechanics.

The new machine will be presented at **EMO Hannover 2023**, and with the collaboration of SIEMENS, will be equipped with the new **SIEMENS SINUMERIK ONE CNC**, with the integration of the **Digital Twin**:

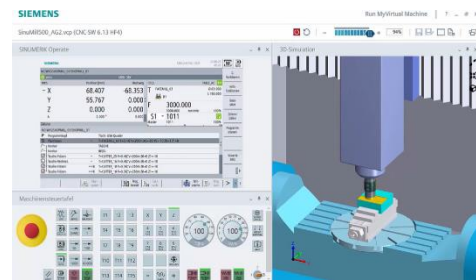
Create MyVirtual Machine /Operate

Create MyVirtual Machine /Operate is the unique and extendable solution to virtually engineer the most critical machine components: NC, PLC, HMI and safety commissioning. The generated commissioning project file can be sold to machine user and utilized in Run MyVirtual Machine /Operate for an efficient and risk-free job preparation process.

Create MyVirtual Machine/3D

In connection with Create MyVirtual Machine /Operate, the machine manufacturer is able to create a kinematic 3D model of his machine. This 3D model can be used for machine engineering (e.g. commissioning of the measuring cycle).

In addition, the manufacturer can supply the created 3D model to the machine user for efficient job preparation. Using this machine model in Run MyVirtual Machine /3D, the operator can virtually run in NC programs and detect possible collisions, programming errors and optimization potential.



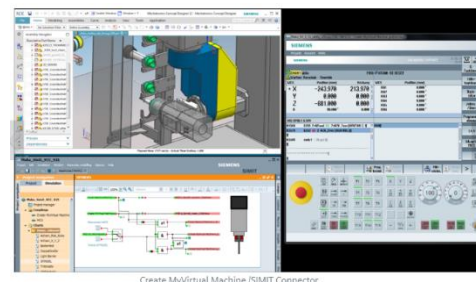
Create MyVirtual Machine /SIMIT Connector

Coupling tool for virtualization of mechatronics model of machine and NC controller for Machine Tools.

Create MyVirtual Machine /SIMIT Connector is an advanced direct link between the virtual CNC control "Create MyVirtual Machine /Operate" and the behavior simulation platform SIMIT.

During machine development, the combination enables a development-based test of the control system programming using a machine behavior model in SIMIT.

In addition, "Create MyVirtual Machine /SIMIT Connector" can be combined with "Create MyVirtual Machine /3D" for the purpose of visualizing machine kinematics.



www.mandelli.com

For information:

www.siemens.com

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:

Contact information of Piattaforma India desk:

Mr. Nilesh Joshi
Manager - Italian Machinery Desk in India



C/o The Indo Italian Chamber of Commerce and Industry
11th Floor, Tower - A, Urmi Estate 95, Ganpatrao Kadam Marg,
Lower Parel (W), Mumbai 400013, Maharashtra

P: +91 22 67728186

Mob : +91 7666795385

Fax. : +91 22 67728191

Email : italianmachinery@indiaitaly.com

