

2013 INNOVATION AND INVESTMENTS







O.M.S. s.r.l. Overview of OMS innovations and improvements in 2013





- Mori Seiki NLX2500 Lathe
- MT Module for Mastercam X7
- Three-dimensional measuring machine DEA TIGO
- Storage area of raw materials and roughing
- Corporate network for machine tools
- Stores and NC Management by Handheld
- Solution Management of CP and CP_{K} using OMSQA

Mori Seiki NLX2500/700 S/Y Lathe







60 % Transport CNC Parts

■ 40 %Chemical CNC Parts



Mori Seiki NLX2500/700 S/Y Lathe



Thanks to the **Mori Seiki NLX2500** lathe it's possible **to reduce the Lead Time Delivery**, thanks to the execution of the piece in a single grip , using it's 2 head of work , double tools system , and automatic Download piece system. This working method takes the name of **Done In One Process**;

This machine features standard and optional equipment that allow a measurement uncertainty within ± 0.005 in the production setting.



Technical details

Turning max. lenght (mm)	728
Turning max. diam. (mm)	460
Bar passage (mm)	80
Number of tools	12
Axis Stroke X/Z (mm)	260/795



CNC Mr

DEA TIGO



TIGO SF Measuring Machine is versatile and high performing, ideal for workshop use and **requires no air supply**. Its robust and compact design ensures extremely precise measurements while its innovative operating principle simplifies the dimensional inspection of any piece, making the world of metrology accessible to all. Designed to operate in harsh environments, TIGO

SF is fully protected by guards and bellows and represents the ideal combination of strength, flexibility and innovation.

Thanks to its structure cantilever, TIGO SF is **fully accessible from three sides**, and provides optimal access both during the programming phase, both for the operations of loading and unloading. The robust and large granite top, equipped with a dense grid of threaded holes, makes it extremely easy mounting of the pieces.



MT Module for Mastercam X7





35% Transport CNC Parts

■ 35% Chemical CNC Parts

■ 30% Racing Parts





MT Module for Mastercam X7



Mastercam Mill -Turn eliminates unnecessary steps and simplifies the programming of multistream multi-tasking machines

- Setting of Work: Choose the initial machine environment. Mastercam uses these settings to automate the transfer of the piece, creating work plans, the definition of the raw and the management of workflows.
- **Tools and processes:** Mastercam Mill -Turn combines the power of the working strategies of milling and turning to get the best of their multi- turret machine; greatly simplifies the combination and synchronization of the machine axes, the creation and choice of tools and processes appropriate to the task at hand. The result is a simple programming, fast, reliable and optimized.
- Automatic transfer of the piece: The definition of the machine pre- set, the management of the transfer of crude oil becomes a simple and automatic.
- Synchronization Manager: The synchronizations management system provides a simple and at the same time very powerful interface to treat quickly and intuitively different workflows that the multitasking machine must perform .
- **Machine Simulation:** Simulates synchronized operations and optimized as if you were on the machine to get an accurate preview of the final work .
- Process Workflow: Generate machine code suitable and optimized for your machine.



Storage area of raw materials and roughing

In order to improve its productivity OMS has decided **to limit** the raw materials in an area best suited for their storage, performing **roughing** operations on machines longer fit for purpose.

This results is **an economy** in terms of **money** and **time** because are not more involved high precision machines suitable for finish machining.



Corporate network for machine tools

To improve and simplify the transfer of the programs by and from the machines, **OMS has implemented its corporate network**, linking each machine to the network.

This allows to **reduce considerably the time of transfer of the programs** from PC to machine, and from machine to machine.

A single operator, using a PC now has access to the internal memory of each machine, and can quickly transfer any program from one machine to another.





Store and NC management by Handheld

Raw materials warehouse

Tools warehouse

NC Management

Quality Managment

Automatic Supplier Order





Store Management



OMS, in order to **improve the management** of its stores, has introduced the use of a handheld with procedures tailored to our working reality. It is now possible manage the acceptance of raw materials totally by handheld, which, through bar code reading, are automatically loaded to the warehouse and divided into identification lots.

Regarding the qualitative part, was made a dedicated procedure relating to the controls of approval acceptance.

Similarly, the tooling supply is managed with the load on stock by reading the barcode of the input material.



Quality Management



Thanks to the dedicated procedure it's possible to **record the checks approval at the start of the production** directly from the handheld.

OMS implement these innovations in compliance with the purpose of continuous improvement.



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Automatic Supplier Order

Appropriate procedures have been set up for the management order to supplier.

Setting all the details needed to complete the order **an email is automatically generated and sent to the supplier**.



NC Management



OMS, in order to improve its quality standards has decided to notify and manage Not Conformity during production by handheld. If a defect is detected in production, it's possible to open a Not Conformity directly near the machine, correlating the information sheet with the photos of the item in question.







Management of CP and CP_{K} using OMSQA



33% Transport CNC Parts

33% Chemical CNC Parts

33% Racing Parts

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Management of CP and CP_K using OMSQA



OMS, in order to improve its production quality standard has decided to keep under control capability indices of its processes using a dedicated software, specially created, which allows to monitor these values.

Nr 3 units of measuring machines 3d makes converge measurement values on a server, where OMSQA draws on data to be processed. This allows us to act quickly to avoid a drift of the technical dimensions of the articles we produce, this is the way to be able to warrant 1.5 Min value of CpK in order of 0.010mm of tolerance







Two-spindle Multitasking Mazak Integrex i200 Machine



Mazak Integrex i200 Two-spindle multitasking machine



40% Transport CNC Parts

■ 40% Chemical CNC Parts

20% Racing Parts



Tag Perf CNC Machines

Mazak Integrex i200 Two-spindle multitasking machine

The **Two-Spindle Multitasking Mazak Integrex i200 machine**, on which was installed a gantry loader with sixteen pallet to work in automatic mode, it's equipped with the fifth generation multi-tasking Mazak technology; it is characterized by a large work area and high precision performance, over an ergonomic design.

The MAZAK INTEGREX i200 is able to complete the entire process - from raw material to finished product - in a single placement machine, and this is also due to the **large integrated tool magazine** of **110 workstations**. The spindle of high-speed milling, of advanced design, can take up to **240 -degree** angles and the two **electro-spindles** contributes to a machining flexibility unparalleled.

In addition, the large X-axis (**615mm to 125mm excursion over the zero spindle**) and the Y-axis improved (**250mm stroke**) are designed to further facilitate the use of the machine.

The B-axis indexing and positioning of the cutter head allows **increments of 0.0001** ° due to the coupling between the shaft and gear camshaft bearings and linear scales in standard

The Mazak Integrex i- 200 was equipped with a **Renishaw** probe for automatic measurements during the machining process, which allow to run already finished products in the machine, having a tolerance of 0.002 mm.

The union between the **precision offered by the machine, the gantry loader** and the **Renishaw** probe allow us to move from the rough bar to the finished product, milled in three positions, in a single cycle totally automated .