

# 2013 INNOVATION AND INVESTMENTS



**O.M.S. s.r.l.**

Overview of OMS innovations and improvements in 2013

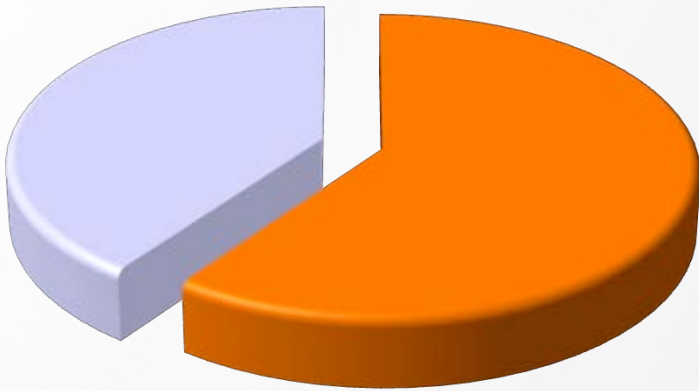


# BRIEFLY



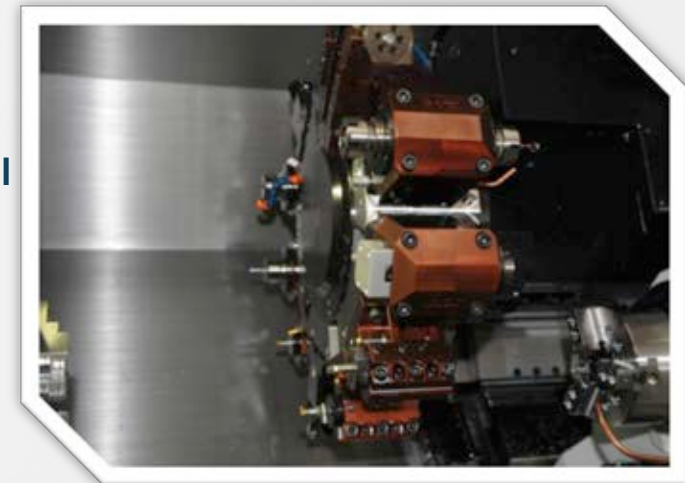
- Mori Seiki NLX2500 Lathe
- MT Module for Mastercam X7
- Three-dimensional measuring machine DEA TIGO
- Storage area of raw materials and roughing
- Corporate network for machine tools
- Stores and NC Management by Handheld
- Management of CP and  $CP_K$  using OMSQA

# 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**;

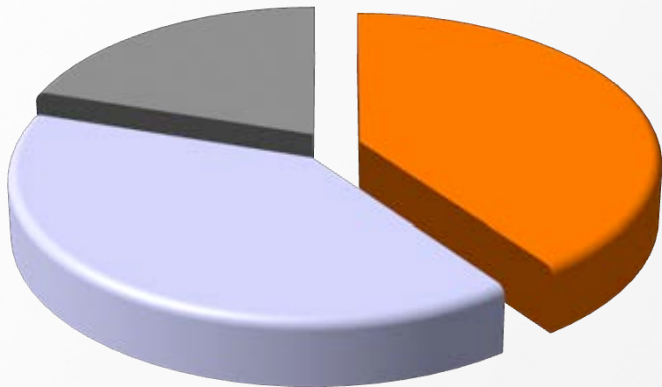
This machine features standard and optional equipment that allow a measurement uncertainty within  **$\pm 0.005$  in the production setting.**



## Technical details

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

# DEA TIGO



- 40 % Transport CNC Parts
- 40 % Chemical CNC Parts
- 20 % Racing Parts





# DEA TIGO



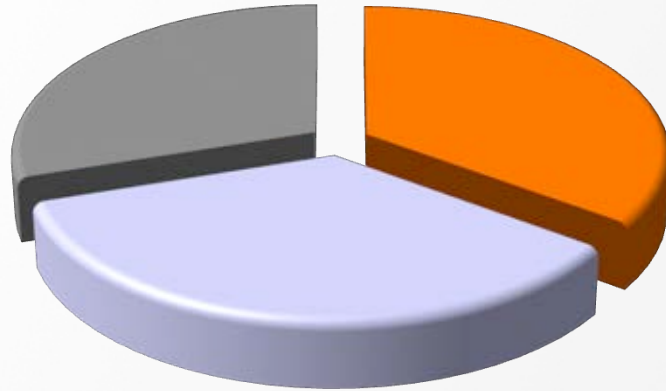
## TIGO SF - A "touch" of innovation to the workshop measurement

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.

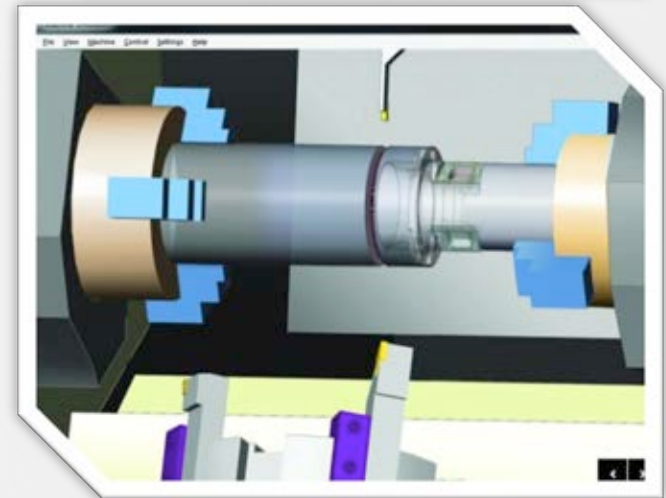
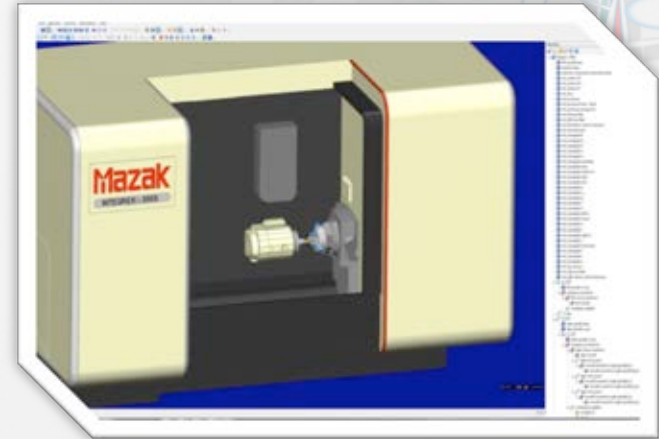
Thanks to its structure cantilever, TIGO SF is **fully accessible from three sides**, and provides optimal access both during the programming phase, both for the operations of loading and unloading. The robust and large granite top, equipped with a dense grid of threaded holes, makes it extremely easy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

The Mastercam X7 logo features the word 'Mastercam' in a bold, black, sans-serif font, followed by 'X7' in a larger, bold, black, sans-serif font. The 'X' is stylized with a red and white gradient.



## 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 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**.



The screenshot displays a software interface with a table of production data. The table has columns for 'Order no.', 'Description', 'Plant', 'Date/Start', 'Date/End', 'Proc.', 'Specs/Min', 'Specs', and 'Status'. The data is organized into rows, with some rows highlighted in blue. To the right of the table, there are several control panels and input fields, including a 'Print' button and a 'Close' button.

Order no.	Description	Plant	Date/Start	Date/End	Proc.	Specs/Min	Specs	Status
001	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
002	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
003	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
004	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
005	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
006	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
007	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
008	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
009	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
010	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
011	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
012	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
013	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
014	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
015	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
016	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
017	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
018	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
019	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO
020	Test CNC Sensory PLS	04 - LABORAZIONE SC. MATERIALI	2005/01/11 8:00		NO	NO	NO	NO



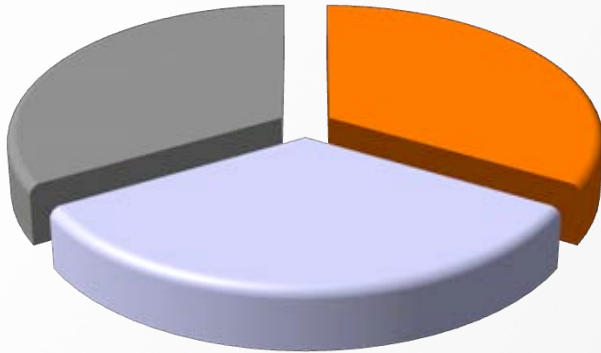
# NC Management



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<sub>K</sub> using OMSQA



- 33% Transport CNC Parts
- 33% Chemical CNC Parts
- 33% Racing Parts

A screenshot of a software interface showing a data table. The table has multiple columns, including what appears to be a part number, a description, and other attributes. The data is organized in a grid format with alternating row colors (white and light grey). The interface includes a menu bar at the top and a toolbar on the left side.

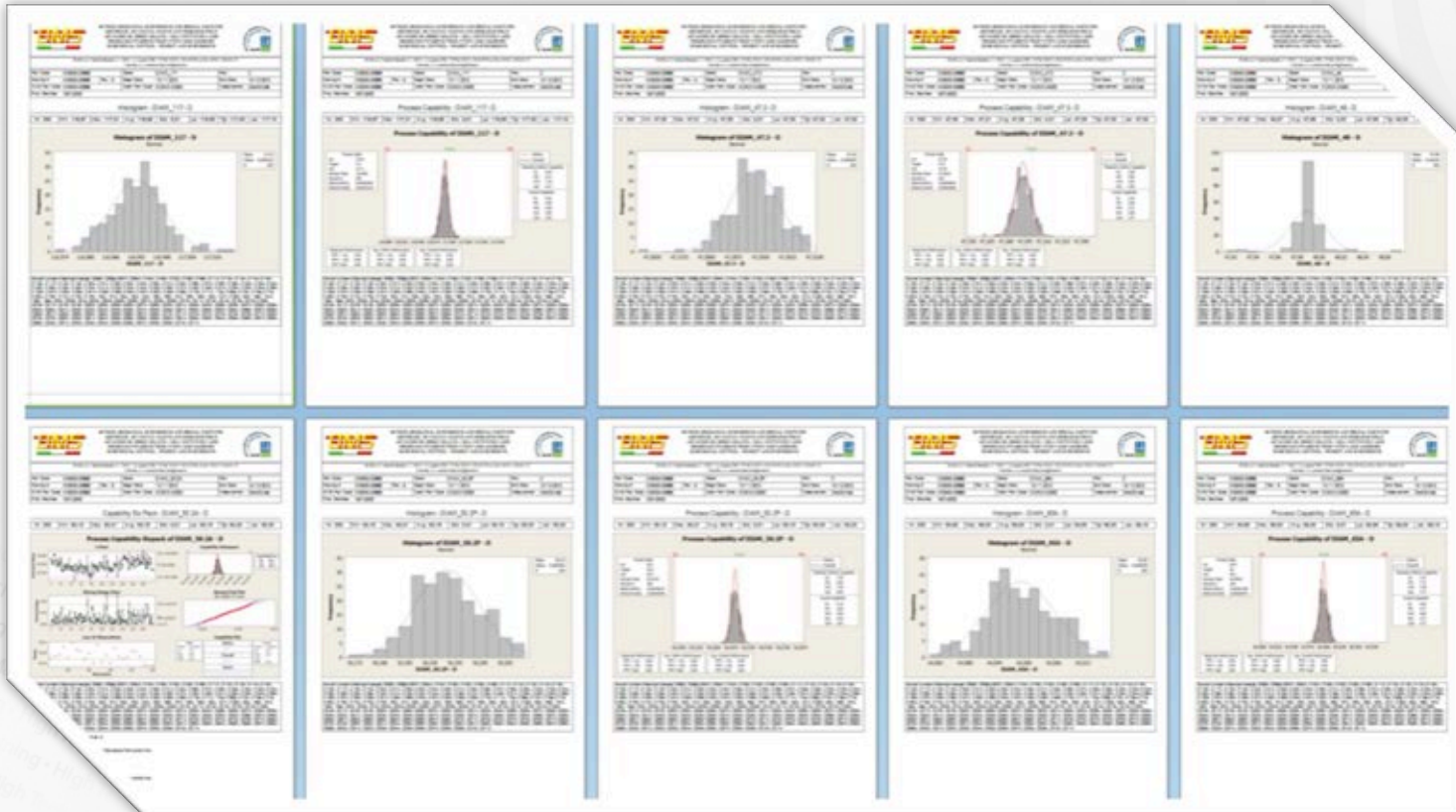


# Management of CP and CP<sub>K</sub> using OMSQA



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



# New Integrex i-200 S

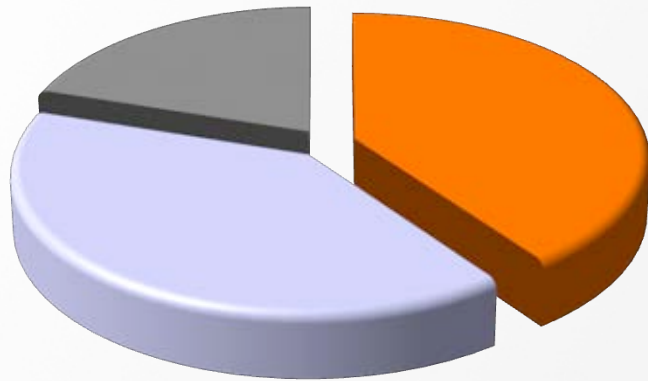


Two-spindle Multitasking Mazak Integrex i200 Machine



# Mazak Integrex i200

## Two-spindle multitasking machine



■ 40% Transport  
CNC Parts

■ 40% Chemical  
CNC Parts

■ 20% Racing  
Parts





# 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 INTEGRIX 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 .