CIMCO MDC-Max

How customers have benefited from installing MDC-Max

CIMCO MDC-Max highlights manufacturing problem within 24 hours of installation

A CIMCO Machine Data Collection (MDC) system was recently installed at a customer site that had tooling cost issues. The Production director had only recently taken over the management of the shop floor and felt that the tooling costs were too high. CIMCO MDC-Max was installed and completed before the night shift arrived. The next morning the production director checked the monitoring data collected from the machines and immediately had his answer.

The night shift cycle times for 4 machines were 30% less than during the day and the same machines were stopped for over an hour at the end of the shift. The operators had turned up the feedrates so they could take a break at the end of their shift. But the increased feedrates resulted in poor tool tip life and increased tooling costs. The customer now has reduced tooling costs while still achieving the same production schedules and says that the system will pay for itself in a matter of months .

CIMCO MDC-Max tracks reasons for machine down time

A large Aerospace contractor were concerned that their production was not keeping up with demand and had made the decision to buy several additional machines. They were suggested to check the runtime clocks on the machines for a week to see how much production time was being achieved. They were astonished to find that their machine utilization was below 50% but could not get an accurate picture of why this was happening.

CIMCO MDC was installed to monitor the machines along with bar code readers for the operators to swipe downtime codes. MDC highlighted several problems in production two of which were poor maintenance response and failure to replace tooling quickly enough to get the machine back in production. Following the MDC installation the customer implemented several measures including a priority system for maintenance and availability of new pre-set tools. They now achieve overall machine utilisation of over 68% and meet their production targets which has increased profitability so they can now invest in a new plant.

CIMCO MDC keeps lights-out machining on track

A North West company approached the Advanced Machining Centre in Nelson to find them a solution to their lightsout machining problems. They had 4 automatic bar fed lathes that ran through the night but occasionally one would stop and no-one was there to fix the problem and restart production.

It was decided to install CIMCO MDC which monitors in-cycle from the machines and, if the machines stops, sends an email and a text message to a stand by operator at home. The company has increased production and machine utilisation without having to pay increased wage costs.

MDC helps everybody in the Company not only Management

I would like to install MDC but know there will be resistance from the shop floor

Many shop floor staff are suspicious of monitoring systems as they see it as “big brother” watching them trying to get them to work harder. However MDC can actually benefit the staff by highlighting problems that have been apparent to them for some time but have been unable to convince management of the problem.

We installed MDC at a company that was not hitting production targets and the production manager was being pushed to increase production. He had already reported problems with several of the machines that made it impossible to hit the targets but nothing had been done. Two weeks after installation the production manager sat down with the MD and the MDC figures showed conclusively that 2 machines were indeed causing the backlog in production.

The machines in question were bar fed machines and the company had switched to a cheaper material supplier but the bars were constantly sticking and jamming the machines causing lost production. MDC highlighted this problem and the company changed back to their original supplier and are now hitting their production targets.

MDC Max5

The Professional Choice for Manufacturing Data Collection

- **Make informed production decisions**
- **Identify and address production bottlenecks**
- **Effectively manage machine maintenance**
- **Improve Overall Equipment Effectiveness (OEE)**

Profitability through Efficiency

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CIMCO Integration
When Reliability Matters

Powerful machine data collection

CIMCO MDC-Max 5

Make informed production decisions

CIMCO MDC-Max is a real-time software machine tool data collection system that gives you instant reports and charts about your shop floor productivity. MDC-Max makes your decisions easy as they will be based on accurate data collected from your machine tools.

In today's complex and competitive global markets, it is more important than ever to maximize effective use of manufacturing equipment.

MDC-Max provides powerful machine data collection and analysis capabilities to make this task easier and gives you real time reports including Overall Equipment Effectiveness (OEE).

All of this can be achieved without the need to place PC's beside the machine tools - all the data can be collected by cable, wireless or ethernet (network) and is stored centrally even if you have multiple workshops to monitor.

MDC-Max 5 integrates with the latest version of the most trusted CNC-Communication software on the market - CIMCO DNC-Max 5.

A truly integrated solution

MDC-Max is fully integrated with DNC-Max and NC-Base giving you a complete DNC, document gathering and Machine Data Collection system from one supplier.

CIMCO MDC-Max

MDC-Max is the software which is responsible for collecting all the machine tool data for in cycle and number of parts produced.

CIMCO DNC-Max

DNC-Max controls the sending and receiving of CNC programs to your range of machine tools. Programs can be requested from the machine control thus avoiding the operator having to leave his machine. Any program changed by the operator and sent back to DNC-Max can be automatically raised in version or stored in a quarantine area. This gives you the ability to track changes and revert back to any previous version if necessary.

Office

PC running
CIMCO MDC-Max

CIMCO NC-Base

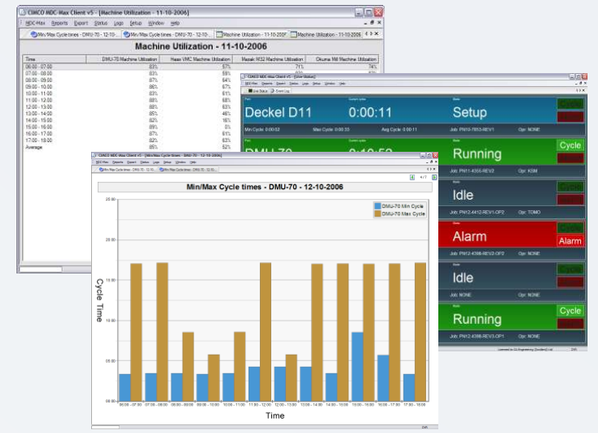
The data collected by MDC-Max can be analysed immediately by the NC-Base module to produce graphs and charts showing you exactly what is happening with your production schedules. NC-Base also allows you to store any documents related to a particular job. These can be drawings, photographs of machine setups, tool lists, operation sheets, CNC programs etc. This makes finding any information about a particular job extremely easy.

Shop floor

Reports and Graphs

With over 100 available report templates you can easily display your data to enable you to explore down to the appropriate level to see exactly what is happening with your production schedules.

- Cycle Time per Part (min, max and average)
- Number of parts per shift / operator
- Number of scrapped parts
- Machine downtime
- Scheduled Maintenance
- Unscheduled maintenance
- Setup Time per part
- Operator effectiveness
- Overall Equipment Effectiveness (OEE)
- Realtime Machine Display
  (see which machines are running at a glance)



How MDC-Max works

On a typical installation we fit one of our MDC units into the machine control. This unit is wired into the Cycle start and Parts counter relays. Every time the machining cycle or the parts counter signal is detected by the MDC unit a code is sent back to the MDC-Max software. Because of the variety of types of machine controls the monitored signals may vary depending on customers requirements.

These codes are recorded in realtime on the computer system and can be displayed immediately in a graphical format.

If a machine is not in production for any reason the operator can scan a barcode to let the MDC-Max system know why the machine is stopped. These codes can be customised to suit your company but typical barcodes would be for the following reasons.

- Waiting for Setter
- Waiting for Maintenance
- Waiting for Tooling
- Waiting for Material
- Waiting for ...

As MDC-Max records all this information you can then produce reports to see how much production time has been lost due to waiting for tooling etc.

Features

Windows Integration
Integration with Windows Server 2003 and Microsoft SQL database technology

Hand-held support
Hand-held PocketPC client to check machine status via wireless anywhere on the shop.

Complete Monitoring
Monitor your machines from any PC connected to your network.

Monitor machines in a remote shop via WAN or VPN technology.

Monitor machines via the internet and a web browser.

Lights Out Monitoring
The latest software also includes full "Lights Out Machine Monitoring"

Pager & text messages
Run your machines unattended and get a pager or text message when a machine stops.

View data from anywhere
View the machine status over the internet from home or off-site.

View camera feeds
Connect to shop-floor cameras via the internet to see if an operator or engineer is needed to fix the problem.

SMS Messaging

Out of the factory - no problem! When a machine has a breakdown you will be notified immediately by text message delivered automatically to your mobile phone. At the same time the text can be sent to a machine setter or maintenance engineer so the problem can be dealt with immediately. You will be back into production quicker and meet those tight delivery schedules.