

PRESS RELEASE 10/07

USER REPORT

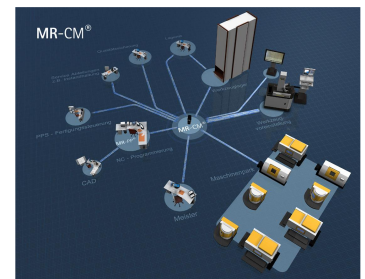
MR-CM® (CAM Data Manager) in combination with a ZOLLER presetting and measuring machine

- The tried-and-tested solution for paperless production

Engineering companies know the problem: All units in the production process (CNC machines, presetting machines, storage systems, etc.) have their own level of intelligence, and levels differ from manufacturer to manufacturer. In and of itself, each system functions without problems. What is missing is intelligent networking for concentrating data. The usual cause of this failure is the quantity and variety of the communications interfaces required. This means, in spite of the latest technology, many companies nowadays are still incapable of generating their tool presetting data in file format. In spite of a DNC connection, they cannot transmit any tool data online to the NC controller. This means: tool data continues to be typed into the machine controller by hand, as in the past. This is a potential error source with potentially serious effects, possibly even collisions. Quite apart from the loss of time due to the manual input procedure and the fact that the machine is stopped for the duration.

Being unable to transmit tool data to the NC controller online not only adds up to a loss of valuable production time but also process security. Once the steps have been taken for implementing online transfer of tool presetting data, the company can save time and trouble during every setup procedure, for the entire service life of the machine.

As a medium-sized company benefiting from a leading position in the global market, Maschinenfabrik Reinhausen (MR) of Regensburg, Germany, faces the daily task of producing quality products efficiently, quickly and without unnecessary costs. This was the challenge facing the MR production engineers when it came to finding their way through the jungle of interfaces. They developed a revolutionary solution: the MR-CM® (CAM data manager).



Caption:
 Paperless production with MR-CM® and ZOLLER



ZOLLER presetting and measuring machine
 - The central basis for inputting and outputting tool data in controller format.

In combination with a ZOLLER presetting and measuring machine, MR-CM therefore offers an optimum solution for paperless production, and one that has already been tested time and time again in practice. - Developed with the expertise of users, for users.

MR-CM® functions as the web server and represents the central information and distribution unit. All modern machine controllers signal their requirements to it using an on-board browser. MR-CM® processes the requests and transfers the results back to the browsers or data systems on the machines.

All participants in the CAM process (machine operator, tool presetter, warehouse technician, foreman, programmer, maintenance engineer, quality assurance worker, administrators) control the data flow with job-related WEB interfaces. The necessary browsers run on the displays of modern machines.

The ZOLLER presetting and measuring machine plays a central role in the data circuit. After all, machines need tools and they have to be measured, preset and tested. This means, literally, no tool can get past the presetting and measuring machine unobserved/unrecorded. The monitor of the ZOLLER machine displays a website for the presetter with the most extensive functions of MR-CM®.

The starting point in MR-CM® involves sending a production job through the PPS system.

From this point on, MR-CM® takes over the intelligent control of CAM data. The presetter is instructed to process the presetting job by an online information system. At the start of the job workflow, the presetting uses the MR-CM® browser on the ZOLLER machine. First, the status of the tool magazine on the machine in question is automatically detected. This data forms the basis for the subsequent tool quantity requirement calculation.

The warehouse system is automatically supplied with control data for the remaining net tools. The tool elements can therefore be removed and mounted without paper lists. The exploded drawing of the tool is displayed as mounting instructions on the presetting and measuring machine. These images are created by MR-CM®. MR-CM® automatically creates the ZOLLER-DNC file for automatic measurement of the net tools on the ZOLLER machine. For this purpose, MR-CM® is capable of selecting the most suitable cutter shapes and measuring programs at all times for various ZOLLER software versions. This ensures that tool presetting staff automatically get all cutters measured automatically at the push of a button. Following this, the tool format of all net tools is generated in machine language and transmitted directly into the controller in a virtual ZOLLER container. This means: the machine operator no longer needs to request this data via DNC, but can start the automatic loading procedure immediately when the tool carriage arrives. During

the loading procedure, the tool graphics of these tools are displayed on the machine controller. **It couldn't be safer or easier! In order to order the NC program, the machine operator uses the MR-CM® browser on the controller (this is possible in all modern controllers such as the 840D) and therefore obtains a previously unparalleled concentration of data: Clamping diagrams, drawings, photos, sequence diagram, program history, 3D simulations; everything can be shown on the controller display! Forget all about paper.**

Completion of all individual steps in the MR-CM® workflow is signaled back to the PPS system.

Numerous additional functions of MR-CM® reduce the number of tools and the amount of paper circulating in production; e.g.: (extract)

- **SEARCH:** The MR-CM® website on the ZOLLER machine makes it possible to scan all machine tools for specific tools. This dispenses with the time-consuming procedure of searching through all machines in the production facility.
- **UNLOAD:** The MR-CM® website on the machine tool calculates the tools that are best suited for unloading by means of a PPS order preview and automatically starts the unloading procedure. Forget all about static complete tools in the machine magazine. Intelligent loading and unloading with MR-CM® gets the optimum out of your machine magazine within the shortest possible time.
- **SIGNAL:** The MR-CM® website in quality checking signals the measuring results back to the machine's MR-CM® website via Chat.

The entire range of features of MR-CM® will also be presented to you at the EMO 2007. You will be able to find us at the E. Zoller GmbH & Co. KG trade show stand in Hall 3, stand D25. We're looking forward to your visit.

Contact MR-CM®:

Johann Hofmann

Maschinenfabrik Reinhausen GmbH

Falkensteinstraße 8

93059 Regensburg

Tel. 0941 – 40 90 340

E-mail: j.hofmann@reinhausen.com

Contact ZOLLER:

E. Zoller GmbH & Co. KG

Einstell- und Messgeräte

Planckstraße 10

71691 Freiberg / Neckar

Tel. 07141 – 7005-0

E-mail: post@zoller-d.com