

KomaxCAO

Production planning – Quality control – Resource management

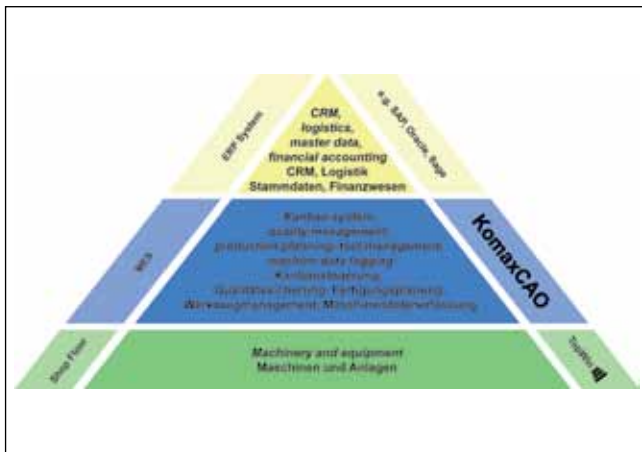


Cable cutting businesses often make great efforts to run their individual machines as productively as possible. For instance, they might organize material changes in clever ways and optimize machine parameters to achieve a large cutting output. However, businesses are frequently unaware that there are additional ways they could substantially boost their productivity and quality. KomaxCAO makes this all possible.

Mirko Bulinsky Product Manager

The ideal MES for harness production

KomaxCAO is a high-performance and scalable manufacturing execution system (MES) specialized in meeting the needs of small to medium-sized enterprises engaged in harness production. Komax developed this software in close cooperation with a Munich-based company called DiIT. As a proven expert in the integration of production and logistics systems, DiIT is the ideal partner for Komax.



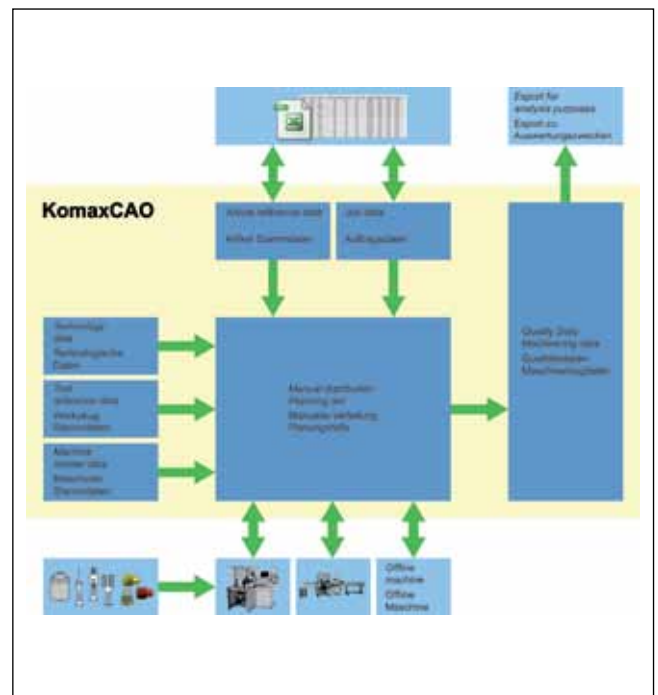
Manufacturing execution system

Easy to install and quick to master

Despite the complex scope of functions involved, the development team managed to implement software that is easy to operate and quick to master. KomaxCAO is as simple as can be to install. Database and server are installed in just a few work steps; no complicated system configurations are required. Staff from the worldwide Komax Service Network are available at any time to help customers put the KomaxCAO software into operation or to master it.

Tailored solutions thanks to the modular design

KomaxCAO grows right along with your business. The operation of the Komax cutting control station offers substantial advantages even when only a small number of machines are networked. KomaxCAO can be expanded functionally by adding various supplementary modules covering functions such as Kanban production, OEE analysis or shift calendar and staff management, to name just a few.



KomaxCAO structure

Networking of machines from different manufacturers

Komax CAO allows you to integrate not just Komax machines into the system but off-line machines as well. Of course, Top-Win and the CAO machine application are perfectly compatible with each other.

Range of functions in KomaxCAO basic version

Central recording of parts, articles and jobs

With KomaxCAO, you can record and manage parts such as cables or contacts as well as articles and jobs in a manner similar to TopWin. You can also load articles and job details directly from an Excel table or a CSV file to connect Komax-CAO directly with a higher-order system.

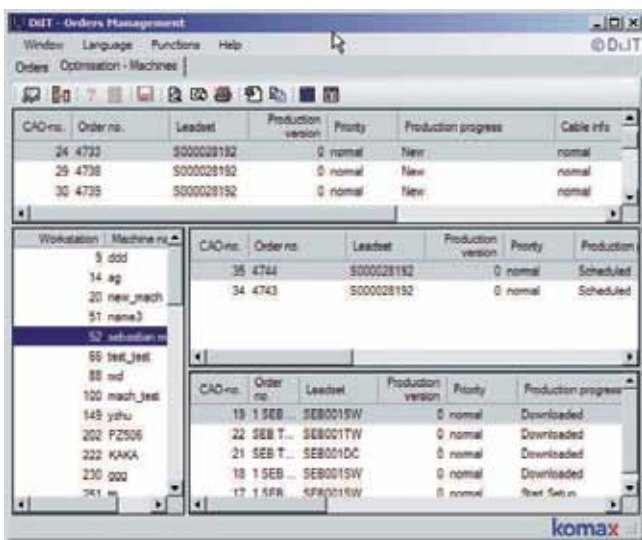
Crimp tool management

You can record crimp tool data centrally. For example, which type of tool is needed for processing which type of contact? Each crimping tool has an individual inventory number what allows you to record the number of hits per tool. This approach ensures effective maintenance. When the service life is over, KomaxCAO generates a message and blocks the tool for production until the tool is released again.

Crimp database

A key requirement for high quality production is to be certain you are working with the correct crimp data at all times. Komax CAO allows you to specify crimp heights and crimp widths, pull-off force and other parameters for each contact, cross section and cable structure.

Machine administration



Job list

Of course, you can also record the most important key data for the machine: the installed modules such as crimp or seal, the range of cross sections to be processed and general

machine capabilities. KomaxCAO replicates the preferred mode of production with the utmost precision. For example, it lets you know which cables, contacts and tools can be set up on or loaded in a machine. The system knows precisely which jobs can be assigned to which machines.

Machine setup and production progress in real time

You can monitor production in real time. For example, which tools or parts are currently loaded in a machine? How is production progressing? In what condition is the machine? You can have all these questions answered conveniently from your vantage point at the cutting control station.

Production planning

Operationally, the central component of the KomaxCAO is the production planning module. From there, you can assign jobs to the machines and obtain an overview at all times of the current state of production. In the basic version of KomaxCAO, jobs are distributed manually but with extensive support from the system. What machines can be used for cutting which job? What is the current work basket of the machines? Further, may jobs be sorted to minimise change over times. If the number of machines connected to the KomaxCAO is growing, the «Planning & Optimization» module would be a sound investment. It constantly works in the background calculating the optimum job distribution. The algorithm takes into account change over times, completion deadlines, estimated production times, availability of resources and other factors.

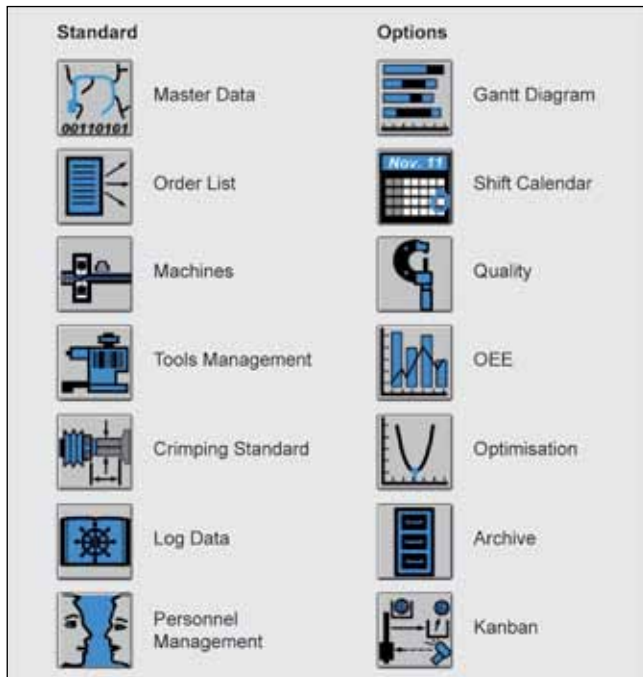
Komax CAO machine application

A KomaxCAO machine application is installed on each machine connected to the KomaxCAO. In this way, the operator receives all instructions such as which job is next and what material and tools have to be used to cut the Job. The operator is also told to perform quality checks. KomaxCAO can be configured in a broad range for this purpose. For example it lets you specify whether yet another measurement should be made at the end of production or what exactly is to be checked. KomaxCAO does not release production until it has successfully verified machine setup (barcode) and checked the quality data. Of course, TopWin and the CAO machine application work perfectly together.

Machine and quality log data

KomaxCAO collects extensive log data from all machines. You can evaluate the data individually to analyze productivity. The log data also has information on machine stops, which is an essential factor for OEE analysis. Whenever the machine stops production for a given amount of time, the operator is prompted to give the reason for the downtime. To verify or back track quality, the crimp height, pull-off force and other measured values for verification are stored with the jobs as are three other information items: time, machine and operator.

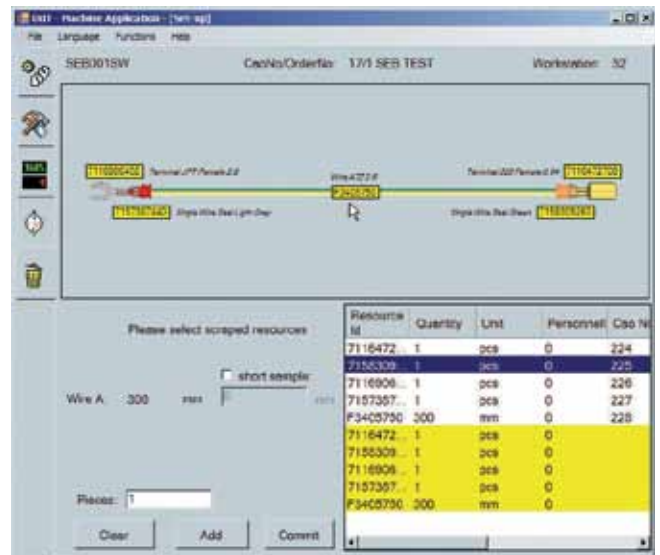
- > Integration of micrographs in production process and job-specific storage of data and micrographs
- > Management reports
- > Extension to a complete MES connected to higher-order ERP and CAE systems with production control in production preparation and assembly.



KomaxCAO modules

Optional KomaxCAO modules covering the following functions

- > Production planner and Gantt diagram
- > Shift calendar and staff management
- > OEE analysis
- > Tool management with tool shop
- > Quality module
- > Job archive
- > Kanban production



KomaxCAO machine application

YOUR BENEFITS

- > Standardized and reproducible processes
- > Avoidance of incorrect setup to ensure maximum product quality
- > Optimum distribution of jobs to achieve highest possible productivity
- > Traceability of production for quality or OEE purposes
- > Reduction of scrap
- > Individually expandable to meet the needs of your business operations
- > Easy to install and maintain