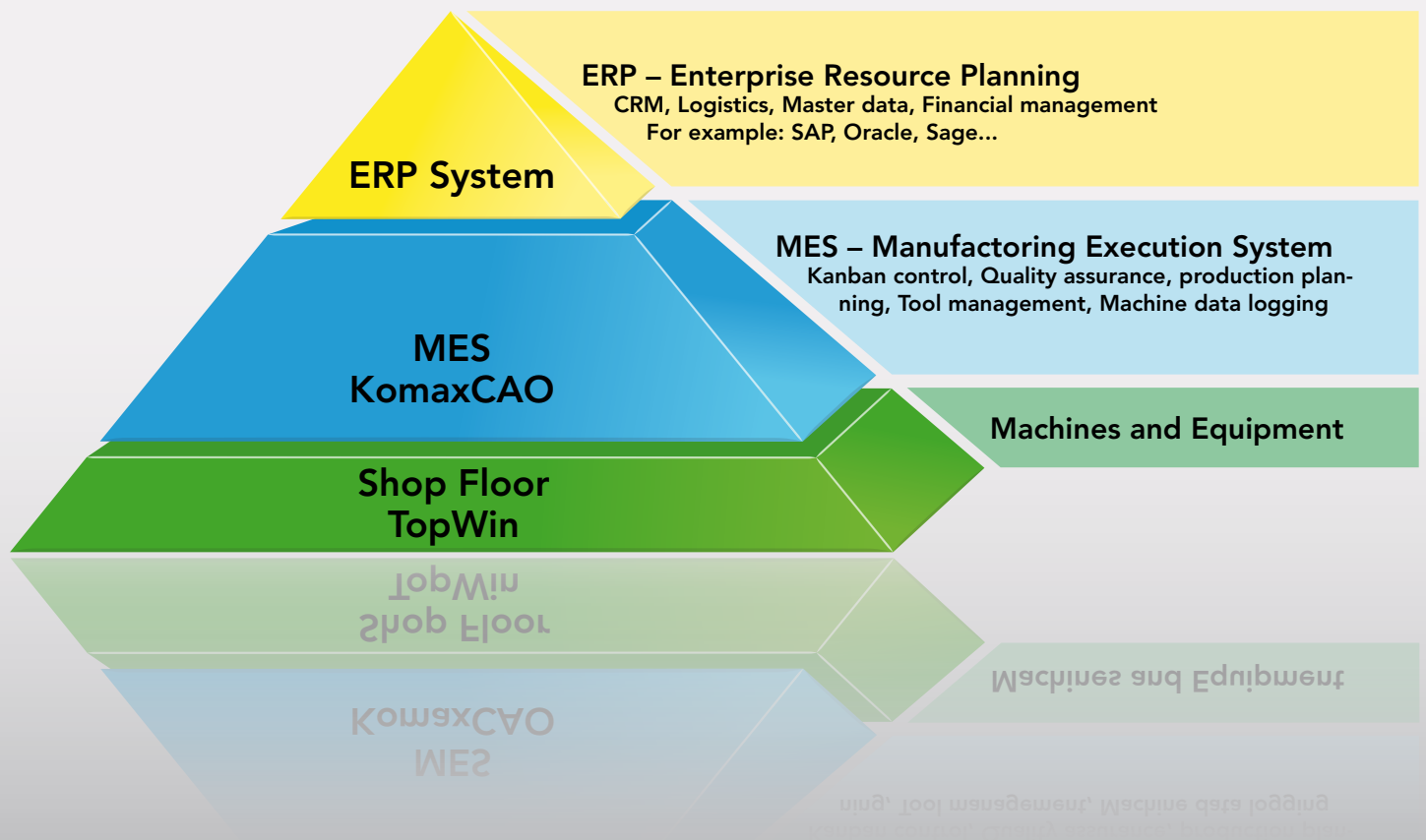




# KomaxCAO

MES (Manufacturing Execution System)  
for the wire processing industry

**komax** WIRE



## THE WAY TO MAKE IT | HIGHLY PRODUCTIVE

Great effort is often made in wire processing to operate the individual machines as productively as possible. For instance, material changes are organised to be highly efficient and machine parameters are optimised to achieve a high cutting output. Wire processors are frequently unaware that the output and quality of overall production can be increased yet again quite substantially. KomaxCAO makes this possible.

### Function

KomaxCAO (Cutting Area Optimisation) is a powerful production control centre for the wire processing industry and fully satisfies the requirements put on a modern manufacturing execution system (MES).

KomaxCAO helps to improve substantially the efficiency and effectiveness of wire processing and the quality of the products.

## Greater use of machine capacity – increased productivity

With KomaxCAO, orders can be distributed optimally among all machines taking into account conversion times, cutting output, machine capabilities and the desired deadlines. A complex algorithm is available as an option for the fully automatic distribution of orders and the constant monitoring of the state of production.

## Fewer rejects

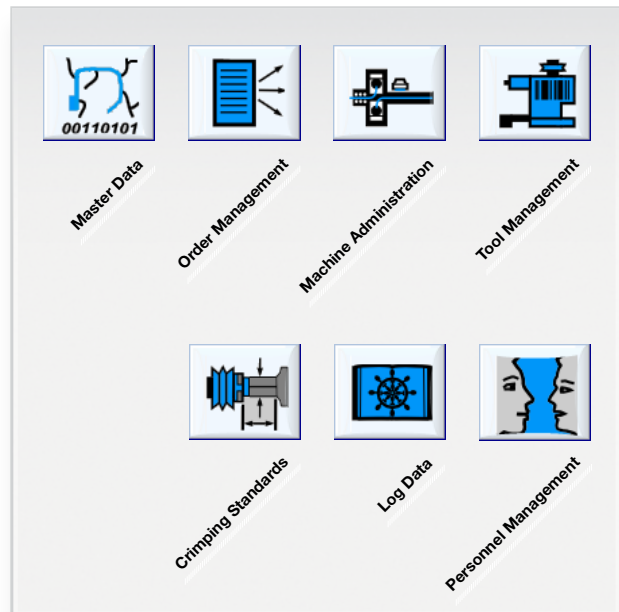
Errors are detected early on and avoided because tools and purchased parts are checked, machines are automatically supplied with centrally managed crimp data and measurements are mandatory. These precautions render elaborate and expensive reworking superfluous. Komax CAO prevents orders being assigned to incorrect machines and defective products being made as a result.

The integrated tool management system ensures compliance with service periods and prevents tools being incorrectly used.

## Customised solutions thanks to modular design

KomaxCAO grows with the business. Companies derive substantial advantages from the operation of the Komax cutting control centre even if only a few machines are networked. You can expand the functionality of KomaxCAO by adding a wide variety of additional modules such as «Kanban Production», «OEE Analysis» or «Shift Calendar and Personnel Management», to mention just a few.

## Range of functions in the basic version of KomaxCAO



▲ Range of functions in the KomaxCAO basic modules

## Master Data

Central recording of parts, articles and orders. In KomaxCAO, you can record and manage parts such as cables or contacts as well as articles and orders, similar to in TopWin. It also allows you to scan articles and order data directly from an Excel table or a CSV file in order to connect KomaxCAO to an ERP system, for example.



▲ Management and importing of master data

## Order Management

Operationally, the Order Management module is the central component of KomaxCAO.

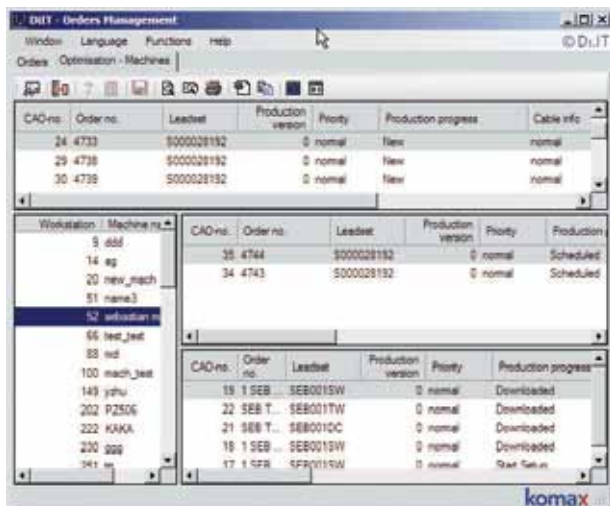
Orders are assigned to the machines from there.

The module also gives an overview of the state of production at any time. In the basic version of KomaxCAO, distribution is manual but the system makes available extensive assistance features. On which machine will which orders be done? What is the working stock for the machines? If additional machinery is added, the Optimisation module is well worth acquiring. It runs calculations continuously in the background to determine the ideal distribution of orders. It takes into account conversion times, completion deadlines, estimated production times, resource availabilities and other matters.

## Machine Administration

Of course the most important key data for the machine can be recorded: the installed stations such as crimp or seal, the cross section range being processed and the general machine capabilities. KomaxCAO depicts the preferred method of production with the utmost accuracy. For instance, it can stipulate which cables and contact parts can be set up.

With this information, the system knows whether the given orders can be assigned to the given machines.



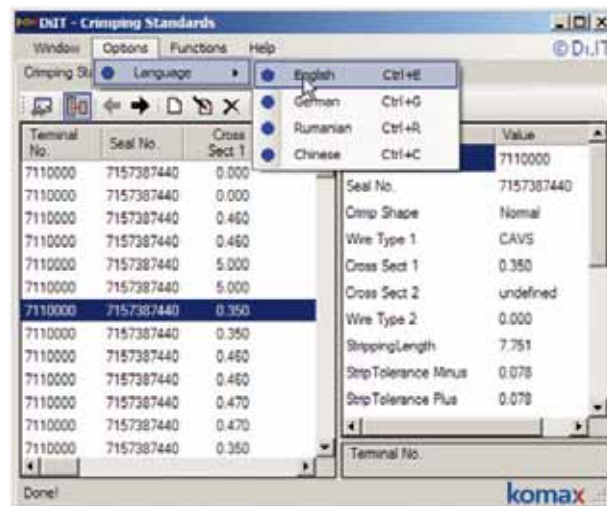
▲ Order Management

## Crimp tool management (Tool Management)

Crimp tool data can be recorded centrally. For example, which contact part can be processed with which tool? Individual inventory numbers are assigned so the number of crimps is recorded for each individual tool. Maintenance is thus assured. If the service period expires, Komax CAO generates a message and disables the tool for production until such time as the tool is released again, e.g. after being serviced.

## Crimp database (Crimping Standards)

Certainty about working with the correct crimping data at all times is among the most crucial prerequisites for high-quality production. Crimp heights and crimp widths, pull-out force and other parameters are specified for each contact part, cross section and conductor structure.



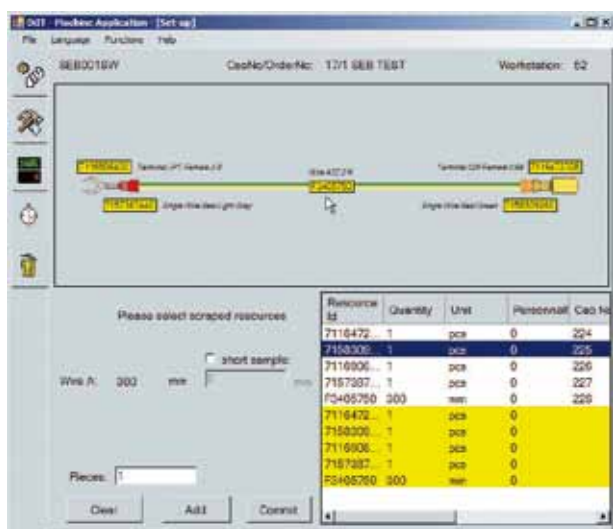
▲ Crimp database (Crimping Standards)

## Machine and quality log data (Log Data)

KomaxCAO collects extensive log data from all machines. These data are evaluated individually for productivity analyses. Crimp height, pull-out force or other measured verification values for orders are saved for quality verification purposes with three pieces of information: time, machine and operator.

## KomaxCAO machine application

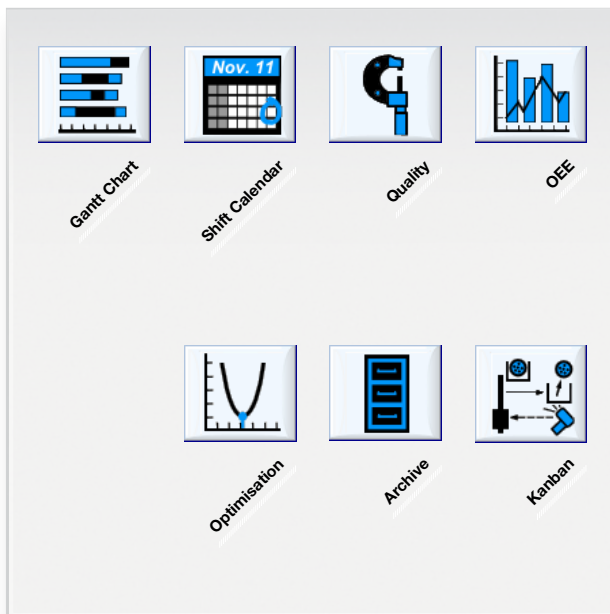
A KomaxCAO machine application will be installed on every machine connected to the KomaxCAO cutting control centre. The operator receives all instructions allocated to this application, e.g. which order follows next and which material and tool have to be used for it. The operator is also prompted to perform the quality checks. KomaxCAO does not enable production until the machine setup has been verified (bar code) and the quality data have been checked. Of course, TopWin and the CAO machine applications work seamlessly together.



▲ **Production** KomaxCAO machine application

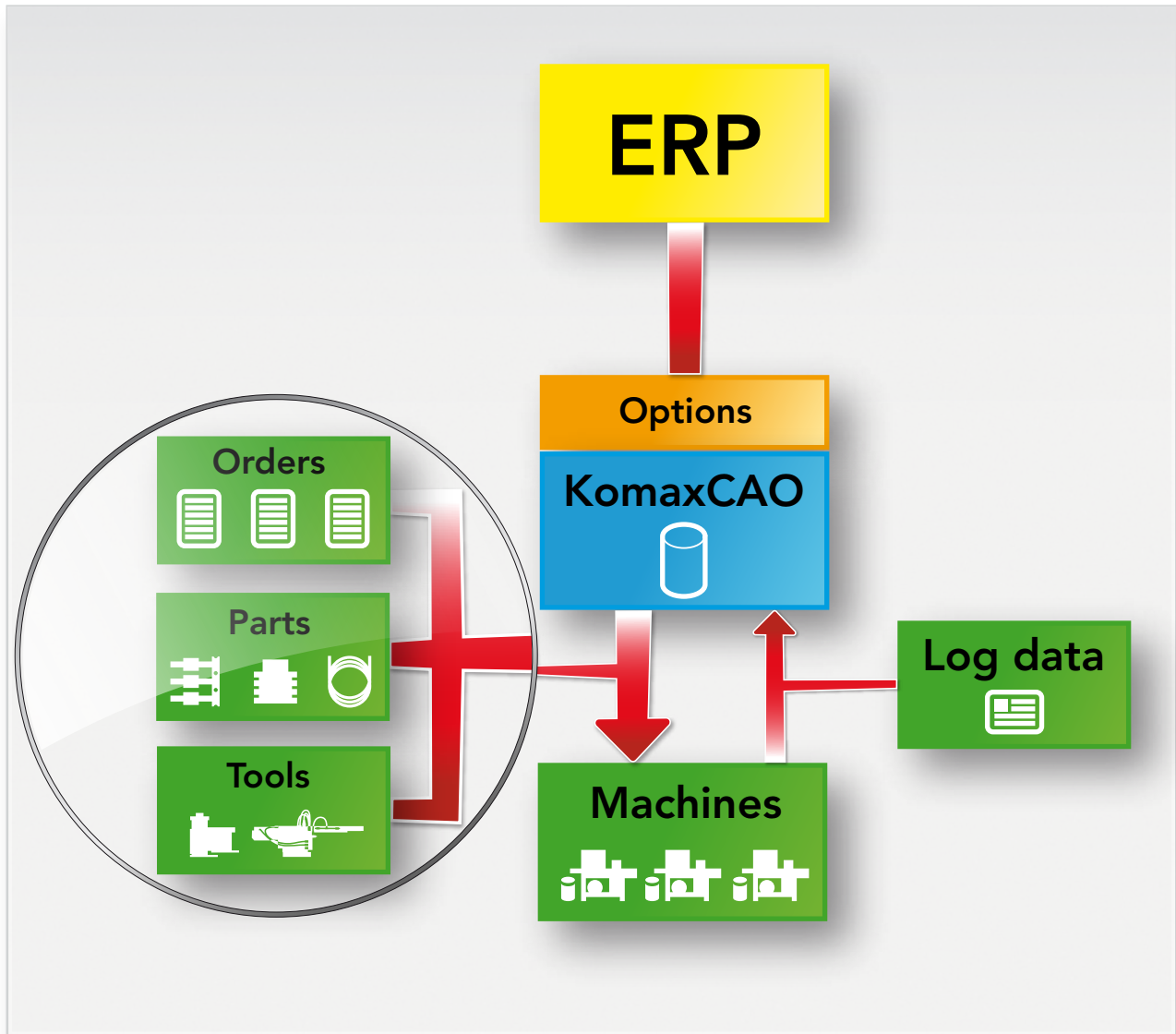
## Expanded functions

KomaxCAO grows with the demands placed upon it, be they related to quality control, order and machine control or production documentation or to reporting and traceability. KomaxCAO meets the toughest requirements.



▲ **Optional KomaxCAO modules**

- **Quality module**  
Satisfies expanded quality requirements (e.g. VW standard, micrograph, required measurements).
- **Optimisation**  
Maximum productivity thanks to fully automatic distribution of orders that takes into account utilisation of machine capacity, setup costs, planning times, etc.
- **Gantt chart**  
Chart depicting an overview of production progress and planned production.
- **Kanban**  
Needs-controlled production in keeping with the Kanban principle. Warehousing costs can be avoided with the Kanban control system.
- **OEE – Overall Equipment Effectiveness**  
Weaknesses in production can be detected thanks to this non-tamperable calculation of overall equipment effectiveness.



▲ Overview of KomaxCAO

**Your benefits:**

- Uniform sequences and reproducible processes
- Maximum product quality, minimal rejects
- Optimum distribution of orders for maximum productivity
- Traceability of production for purposes of quality and OEE
- Expandable as desired; extensive, high-performance additional modules
- Easy to install and service

For more information about our product:



[www.komaxwire.com](http://www.komaxwire.com)

Komax Wire is a division of Komax Holding AG, Switzerland.

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