

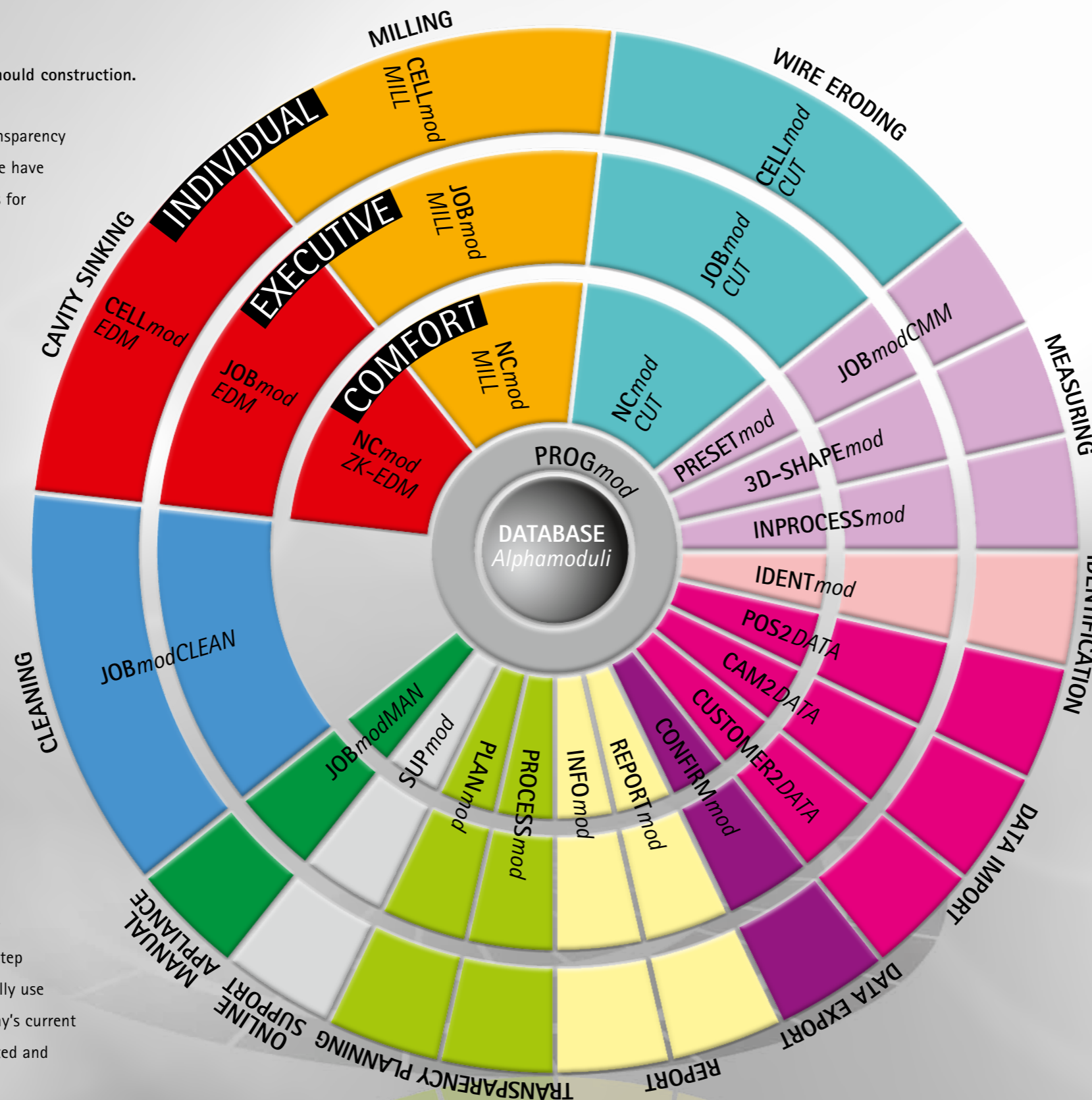


Alphamoduli

The shop floor software
for your process

The shop floor software

Alphamoduli provides numerous individual modules. These map all the processes required for linking and representing each individual process step in your shop floor. You are free to choose and really use each individual module according to your company's current requirements. Each separate module can be adapted and extended individually at a later date.



Alphamoduli allows you to act on three levels:

Your personal introduction to automation. In a series of initial low-cost steps we can help small-sized mould construction companies in particular to pre-set and program cavity sinking and wire-cut EDM machines or milling machines. This also includes the necessary data import from CAD/CAM.

Develop your company further. Either within one technology (milling, measuring, EDM cavity sinking) or across a range of technologies. One thing the Executive level certainly offers is flexibility. Where you need it: during the priority-related processing of tasks, usually in conjunction with a handling system. We can also provide a solution for the reporting of processing and holding times across the various technologies.

On this level, the focus is on automated processes across different technologies as well as on shop floor transparency and planning. The software programs on this level are always customized – tailor-made to our customers' machines and plant. Individual also includes controlling and availability checks.

Alphamoduli

The software solution that organizes, controls and optimizes your processes. Helping you to make your company fit for the future.

PROGmod

The **PROGmod** module constitutes the "heart" of the visualisation of the database. With **PROGmod** you are also on the working level – so to speak your start-up menu. All operations and working steps of the database are visualised and controlled from here.

The **PROGmod** module is the control centre of your workshop. Here you will find all the contents of the *Alphamoduli* database clearly visualised. Whether you enter the data manually or import everything automatically, **PROGmod** adapts itself automatically to your individual requirements and different automation levels. You retain at all times an overview of the current job progress.

MEASURING

Alphamoduli provides four different modules for measuring tasks.

PRESETmod

Your start-up component. With this programme, offset data are calculated from the first machine at the CMM, added to the *Alphamoduli* database and the results documented.

JOBmodCMM

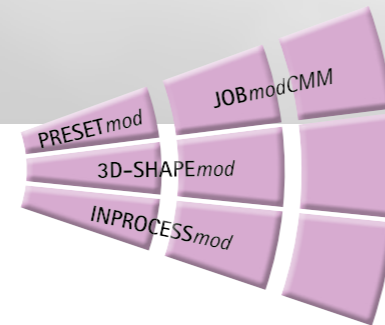
The Job Manager for your measuring machine. It offers great flexibility. Depending on the availability of the data, you can preset electrodes and workpieces manually or automatically. Switching between both operating modes is possible at any time.

3D-SHAPEmod

This module allows points to be measured directly against the data model. This means you are automatically informed about whether the machined part is within the tolerance and can be released for the next machining steps. The models can be processed in the standard data formats used for measuring, e.g. IDGS, STEP (further formats on request).

INPROCESSmod

Measurement against data set direct on the EDM: If measured on the *genius*-EDM against the data model with a 3-D sensor, any required correction can be made immediately, avoiding clamping errors completely.



MILLING

NCmodMILL

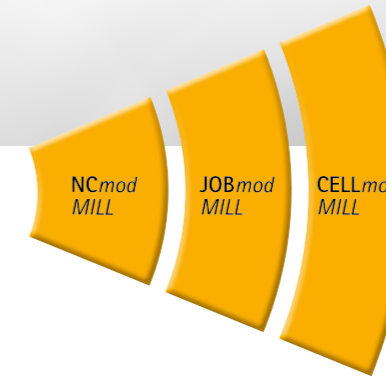
The first step to automation on your milling machine: The offset data calculated on the measuring machine are transmitted to the milling machine and individual NC programmes from the CAM system linked quickly and reliably. Due to the external fitting of the workpieces, you can increase the available machine capacity in the blink of an eye.

JOBmodMILL

This module organises and controls all the jobs on your milling machines. Like all our JOB modules, this enables flexible working according to priorities. The tool management is optimised and the availability checked in advance. Thanks to online access to the machine controls, the system can react immediately to status changes. The assignment of the machining steps of an NC programme for the tools can be interrupted and edited at any time.

CELLmodMILL

The program manages the availability of several milling machines in one manufacturing cell. The whole priority list is allocated to the respective machine availabilities and processed accordingly. With this software module you also achieve transparency and planning for your milling machines.



WIRE ERODING

NCmodCUT

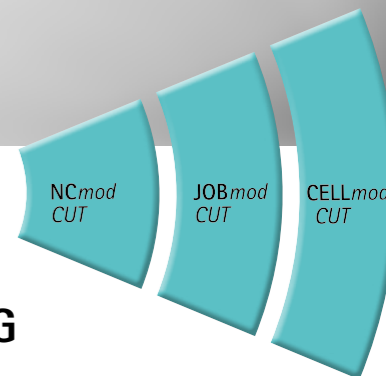
The first step to automation on your wire-eroding machine: The offset data calculated on the CMM are transmitted to the WEDM and individual NC programmes from the CAM system linked quickly and reliably. Due to the external fitting of the workpieces, you can increase the available machine capacity in the blink of an eye.

JOBmodCUT

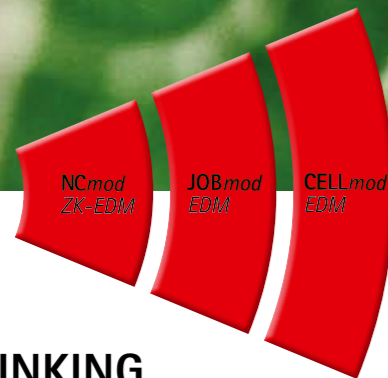
This module is the communicator/organiser between your machines and the handling system. It helps you achieve flexible order processing according to the respective priorities at your wire eroding machine.

CELLmodCUT

The program manages the availability of several wire eroding machines in one manufacturing cell. The whole priority list is aligned to the respective machine availabilities and processed accordingly. With this software module you also achieve transparency and planning for your wire eroding machines.



Alphamoduli



CAVITY SINKING

Since our origins lie in the production of eroding machines, our software products for the EDM sector are divided into three sub-sections:

EDM modules

For our own ZK-*genius* control units, for the predecessor models of the ZK-*PEC/POCON* control unit range, and programs for eroding machines from other manufacturers. This detailed division is necessary for the optimum exploitation of the varying capacities of different control units or to adapt them to the ZK standard. This differentiation guarantees that our software yields a good standard of results, no matter the machine manufacturer.

NCmod ZK-EDM

The external programming station for all eroding machines: Whether for *genius* EDM, older *PEC/POCON* machines or even EDM's of other manufacturers, you programme your EDM programmes with the user-friendly *genius* PROzuk or the process-orientated *genius* set editor. Depending on the control type, the programmes are converted automatically into the required format and made available at the corresponding machine for processing.

JOBmodEDM

The job management for *genius* eroding machines. This module is characterised by priority handling, interruption of ongoing jobs with saving of the interruption point for defined restarting and reporting of the process times. It allows automatic tracking of the programs. Specific rework through under-size and depth correction is also possible. Thanks to the high technical standard of the *genius* machines, no external PC is required. For machines of older ZK series, the *JOBmodPEC/POCON* can be used to achieve the same performance. Non-ZK machines are also integrated in the job management process using existing modules that have been adapted accordingly.

CELLmodEDM

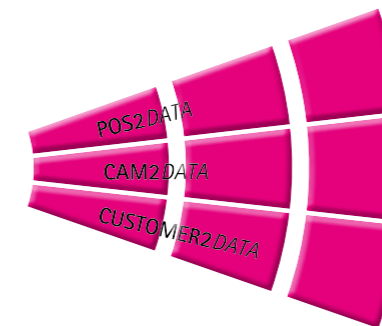
Use this to upgrade your machines for use in a cell. The program manages the availability of several ZK eroding machines of the *genius* series in one manufacturing unit. The whole priority list is aligned to the respective machine availabilities and processed accordingly. With this software module you achieve transparency and planning for your machines. We also supply this module for machines made by other manufacturers.



CLEANING

JOBmodCLEAN

We provide software modules from level 2 "Executive" onwards for automatic cleaning e.g. with our Transclean unit. The *JOBmodCLEAN* organises the washing and drying of electrodes and workpieces during the eroding or milling process. A washing program editor allows individual washing programs to be designed.



DATA IMPORT

We provide three interfaces for data import to the *Alphamoduli* database.

POS2DATA

With this configurable interface, the position data for the sink erosion can be imported direct from the CAD/CAM system into the NC programme.

All data such as electrode names and numbers, undersizes, eroding positions, processing cycles, technology and machine settings can be provided to the EDM in the maximum quality.

CAM2DATA

This enables the import of all data defined in the CAD/CAM area into the *Alphamoduli* database. You save time and obtain data security due to the automatic transfer of job, part and workpiece names, dimensions for the automatic pre-setting, 3-D model data for measurement against data sets, drawings and the compilation of NC programmes for all technologies (wiring, milling, EDM, measurement).

CUSTOMER2DATA

CUSTOMER2DATA is an open communications interface for external software modules with the *Alphamoduli* database. All data can be read, edited and written in the database via a defined XML protocol.



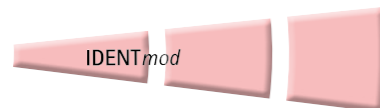
DATA EXPORT

CONFIRMmod

CONFIRMmod provides all process times of the machines connected to the *Alphamoduli* database in XML format for further processing in higher-level PPS systems. We thereby support your estimating and provide figures obtained from experience for future scheduling.

Alphamoduli

Creates transparency down to the last detail and planning reliability for your processes.



IDENTIFICATION

IDENTmod

This software tool – a one-off investment – acts on all three levels of our *Alphamoduli*, from the simple electrode changer to automated handling. It permits the fault-free identification of workpieces and electrodes where placement is chaotic. A part-related status request is possible via the chip at any time: so you can always find every part in your shop floor.



PLANNING

PLANmod

Wherever several workstations or machines are working parallel and you want to optimise their utilisation, **PLANmod** will help you. The program calculates the optimum processing times and visualises the processing steps required for these. This gives you planning reliability for the handling of your customer orders. The capacities become transparent and verifiable. A plus when it comes to scheduling reliability.

TRANSPARENCY

PROCESSmod

This organisational module is used to visualise process steps in the shop floor. The person responsible sees at a glance which workpieces are at which machining stage. Each workstation sees the jobs still to be done and sends a message when these have been completed. Documents such as drawings or quality logs are stored in the database for the respective parts, and are available paperless everywhere.



MANUAL APPLIANCE

JOBmodMAN

Manual processing steps are still necessary in all areas of tool and mould construction: for cutting, fitting, drilling, grinding, testing, cleaning etc. In view of the wide range of these individual manual tasks, it is well worthwhile to consider the individual processing steps and times in relation to the overall process. **JOBmodMan** visualises the job list for the manual workstation and provides all necessary documents for this operation. Jobs can be started and finished manually, and their working time reported. Times are recorded, and the manual workstation integrated seamlessly into the complete process chain.

INFOmod

With this tool, you know what work is in progress. The program reports smooth running as well as any problems with the working processes, and puts a status report together. **INFOmod** is particularly useful for night-time operation or at the weekend, because you receive messages to your mobile*, by e-mail or NETsend – wherever you are.

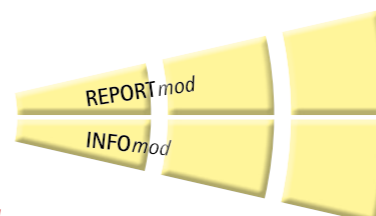
*) not available everywhere



ONLINE-SUPPORT

SUPmod

Thanks to our remote maintenance instrument, online troubleshooting is possible all over the world. The cause of the problem is quickly found by using the log-in functions in the system. Modern data security guidelines are heeded, of course.



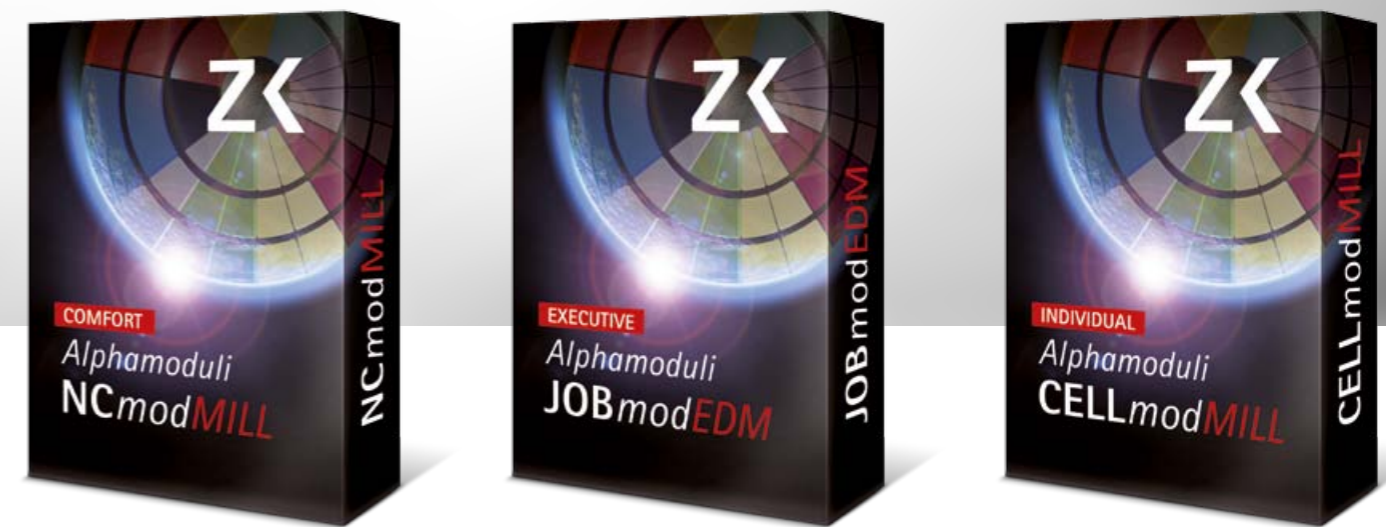
REPORT

REPORTmod

The tool for your operating data evaluation. All times such as machine and programme running times registered in the system are displayed here. Views are provided in the form of calendar or table functions, and can be viewed at any workstation in the data network. This provides you with a basis for reliable calculation.

Alphamoduli

All our programs are technically mature and have been tested during many hours of machine use – otherwise we wouldn't let them leave the premises. Nevertheless, we have an individual and competent customer service available for our software packages. The service supports you and your employees – and that is important to us – during the introduction and implementation of software-related changes. By the way: before you invest in software, it's worth having our software experts analyse your requirements and processes. Because everything you check first could save you significant investment costs later.



MAKE THE MOST OF OUR EXPERT ACCOMPANIMENT FOR YOUR PROCESSES:

PROCESS ANALYSIS

We record your processes directly on the premises and document your workflows. Taking this as a basis, we develop a target definition for your first or further automation steps.

PROJECT PLANNING

We take your tasks seriously. Your project is supported in a clearly defined workflow together with a fixed contact in our company. A specially trained project team supervises the exact process and project progress, and coordinates communication with all those involved. So that in the end, one thing is certain: everything works.

INSTALLATION AND CUSTOMISING

We don't leave you to manage alone during initial installation. Our service staff stays until your machines are running. System configuration as well as any adaptation that may be necessary on site are carried out and tested.

TRAINING

To help you exploit your potential to the full, we can train your employees either at our company or on your premises with your machines or systems. An important module that cannot be emphasised enough: well-trained employees are the key to your success.

START-UP SUPPORT

If you are still unsure after initial training – just give us a call. Because complex systems need more intensive support during the start-up sequence. You can rely on the expertise of our service staff.

TECHNOLOGY TRAINING

Get more out of your machines. During technology training, all standard technologies are adapted to your specific parts spectrum. The success in more than 95% of all cases underlines the necessity of this service.



Zimmer&Kreim GmbH & Co. KG

Beineäcker 10, 64395 Brensbach, Germany

Phone +49 (0) 6161 - 93 07-0

Fax +49 (0) 6161 - 93 07-73

Email info@zk-system.com

www.zk-system.com

Your representative: