HOMAG GROUP

Software from the **HOMAG Group**
for machining centers

lifeline | service

CONTENTS

On the Road to Success with Software from the **HOMAG Group**!

Our extensive range of software, the knowledge of how to implement it and guaranteed compatibility with our machines ensures that you have maximum flexibility while at the same time enjoying excellent operating reliability. Our experienced team of software experts is standing by with a software package that meets all your requirements for integrating the machine into your business. Our stated aim is to offer you all the support you need to achieve success. Take advantage of our range of software modules, which are perfectly integrated into the machine environment.

Advantages include:
» Complete solutions for integrating the machine into the production process
» Investment security thanks to downwardly compatible development
» Coordinated modules
» Modern software architecture

Choose from a wide range of software modules to find the optimum configuration for your requirements.

A **demo version** of the different applications can be found at our web site www.woodwop-forum.de under Download > Download a demo version.

Do you have an individual requirement?
We have extensive experience in developing customer-specific software.

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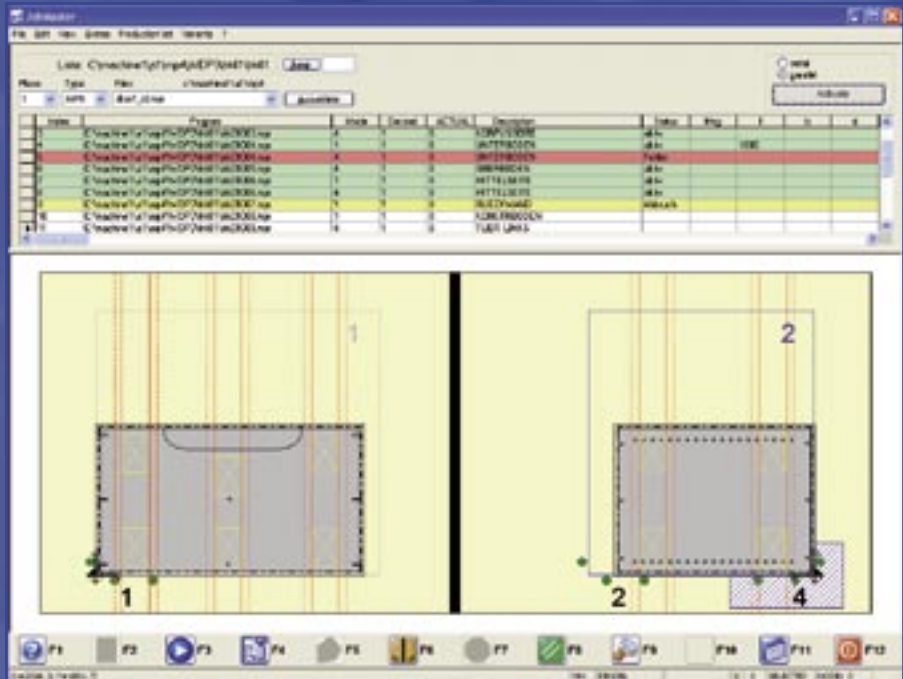
Graphic Station Assignment

![power control icon]

power control
The control system from the HOMAG Group

power control **is the control system from the HOMAG Group. It combines the latest in hardware and software technology and ensures that our highly versatile machines are as user-friendly as possible.**

Graphic CNC Operation

Graphic CNC Operation
In CNC operation, the machine status with regard to machine axes and the situation during program processing is displayed, giving you complete control of speeds, feeds and remaining travel distances at all times. A clock displays the current program runtime.

Graphic Station Assignment
Station assignment enables the operator to specify which workpiece is to be produced in which clamping station. With graphic display of the eventual workpiece selection, the control system offers the maximum in safety and convenience.

Highlights:
» Graphic preview for file selection
» Integrated job schedule control with optional barcode control
» Projection laser control for optimum positioning of suction cups and workpiece
» Automatic generation of temporary programs for producing variants by changing the variable values, or by moving or mirroring the workpiece
» Multiple assignment with different workpieces (optimized for tool changes)
» Operating mode can be switched between individual and alternate processing
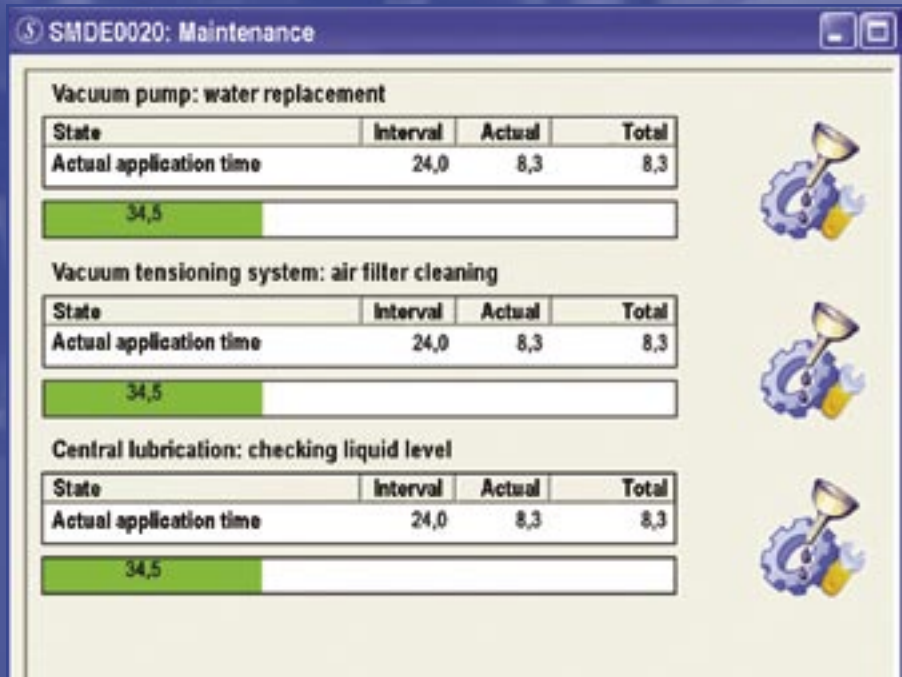
*wood**Scout** Diagnostic System*

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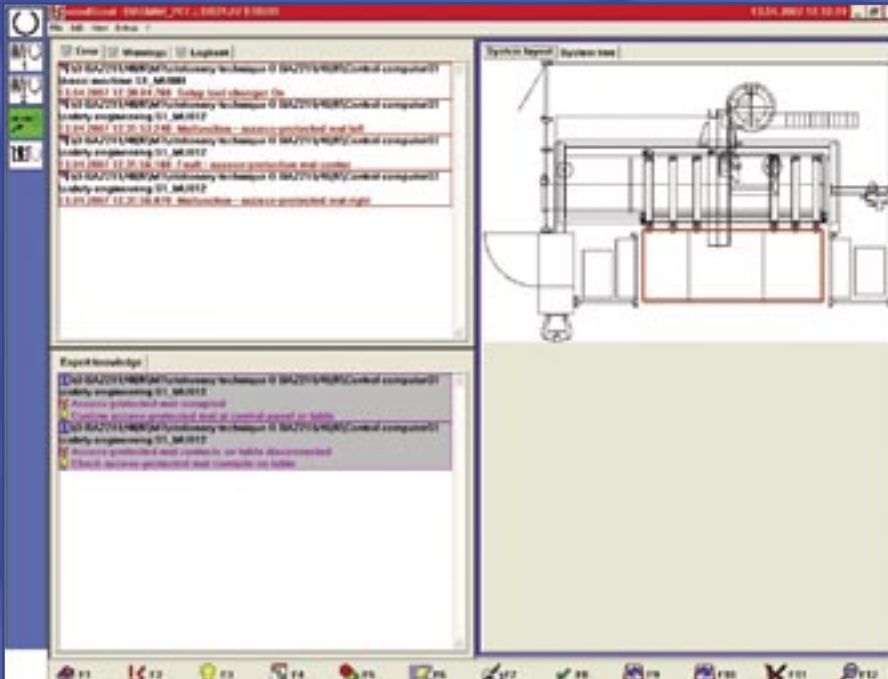
wood**Scout Diagnostic System**

With the wood**Scout** diagnostic system, user-friendly error messages and machine statuses are displayed graphically. The wood**Scout** system allows malfunctions to be corrected systematically and leads to a significant increase in system availability. The user-friendly display of information means that the operator is much more often able to solve the problem alone, without using HOMAG Service.

Highlights:

» Clear plain-text error messages
» Avoidance of subsequent error messages
» Allocation of malfunctions to a malfunction location
» System learns by allocating causes and measures (expert knowledge) to malfunctions
» Increased productivity thanks to systematic malfunction correction
» Graphic PLC diagnostic visualization of machine status, the sensor system and the actuating system on different levels

Vacuum pump: water replacement			
State	Interval	Actual	Total
Actual application time	24,0	8,3	8,3
34,5			

Vacuum tensioning system: air filter cleaning			
State	Interval	Actual	Total
Actual application time	24,0	8,3	8,3
34,5			

Central lubrication: checking liquid level			
State	Interval	Actual	Total
Actual application time	24,0	8,3	8,3
34,5			

SCHULER MDR Basic – Machine Data Recording

power control
## The control system from the HOMAG Group

SCHULER MDR Professional

**SCHULER MDR Basic –
Machine Data Recording**
This standardized software package records important machine data. An integrated counter and predefined maintenance intervals ensure that the machine operator is always alerted in good time to maintenance tasks that have to be carried out. This needs-based maintenance increases machine availability and significantly reduces downtimes due to malfunctions. In addition to maintenance data, the number of processed workpieces and runtimes are also recorded. This ensures that information on productivity is always available.

With **SCHULER MDR professional**, the control system provides transparency in the production process. In addition to the benefits of the basic version, this extended machine data acquisition system also includes the following functions:
» Detailed breakdown of actual application time in production time, setup time, malfunction time and interruption time
» Detailed breakdown of interruption time according to interruption cause
» Shift management and shift reports
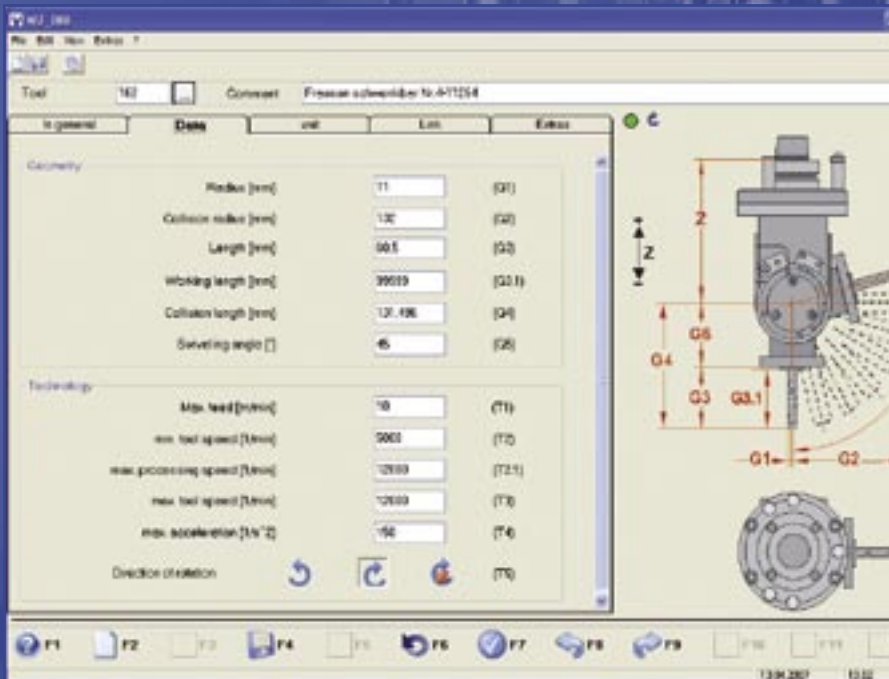
Graphic Tool Database

Graphic Tool Database

Entering and modifying tool data is secure and easy when you use the graphic tool database editor.

» Graphic representation of the tool
» Option for operator to store own tool images
» Resizing the graphics makes it easier to enter the tool characteristics for each tool type

Tool Life Cycle Management (Optional)

With tool life cycle management, the control system provides a module for monitoring and documenting tool use. This data can be used to optimize tool use and to select the best tool for the job.

» Reduction of tool costs
» Increase in availability of the system and improvement in the quality of workpieces due to timely tool replacement

Production Protocol (Optional)

The **power** control system can protocol production events such as program start, program end or program abort in a text file (ASCII file). If necessary, this information can be read by external production control systems and used as replies.

The following parameters are logged as standard for each event:

» Date, time
» Type (program start, program end or program abort)
» Table number
» Program end
» Quantity (multiple assignment)
» Station number
» Mirror image mode
» Variables (optional list if program variables have been replaced temporarily)
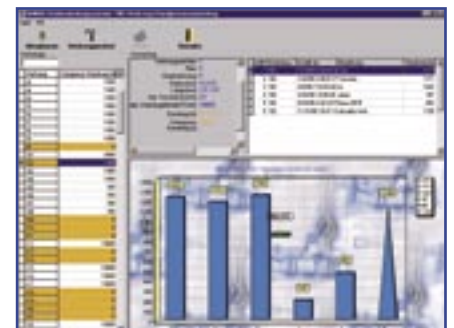
Tool Life Cycle Management (Optional)
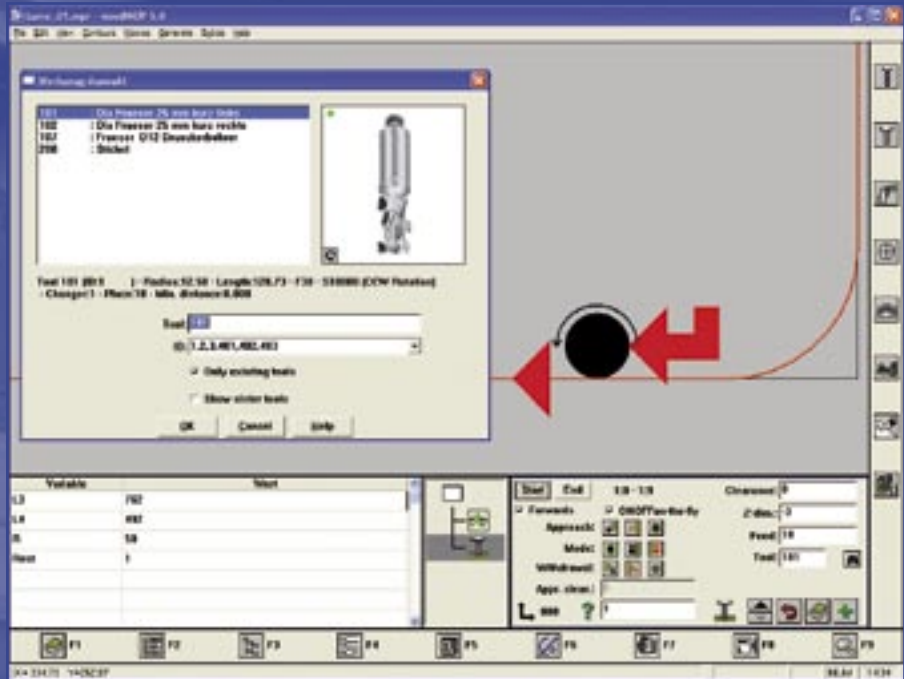
*wood**WOP***

wood**WOP**
## The CNC programming system from the HOMAG Group

*wood**WOP***

Tool Selection

wood**WOP** is a CNC programming system that has been specially designed for the machines of the HOMAG Group. wood**WOP** is a Workshop-Oriented Programming system (WOP). Rather than programming the machine directly, the workpiece and its machining steps are described. This makes programming considerably easier and programs remain versatile.

wood**WOP** offers high levels of convenience by using familiar Windows applications such as cutting, copying and pasting machining steps, and zooming. It is possible to very quickly and easily generate the contour of the workpiece using numerous drawing functions. Furthermore, each machining step has its own macros. This means that routing, drilling or sawing, for example, can be programmed quickly and easily by entering the machining parameters. Variant programs can be easily generated by using variables in wood**WOP**.

Highlights:
» Graphic tool selection
» Automatic suction cup recommendation
» Automatic generation of machining steps for edge gluing
» File Preview and MPR Browser (optional)
» Context-sensitive online help
» Interfaces: DXF, MPR, PRJ (optional)
» Extensive program library with sample programs for contours, cabinet furniture, countertops and doors
» On the Internet: www.wood**WOP**-Forum.de → Help, information and discussion by wood**WOP** users for wood**WOP** users
» Global sales of more than 10,000 machines with wood**WOP**
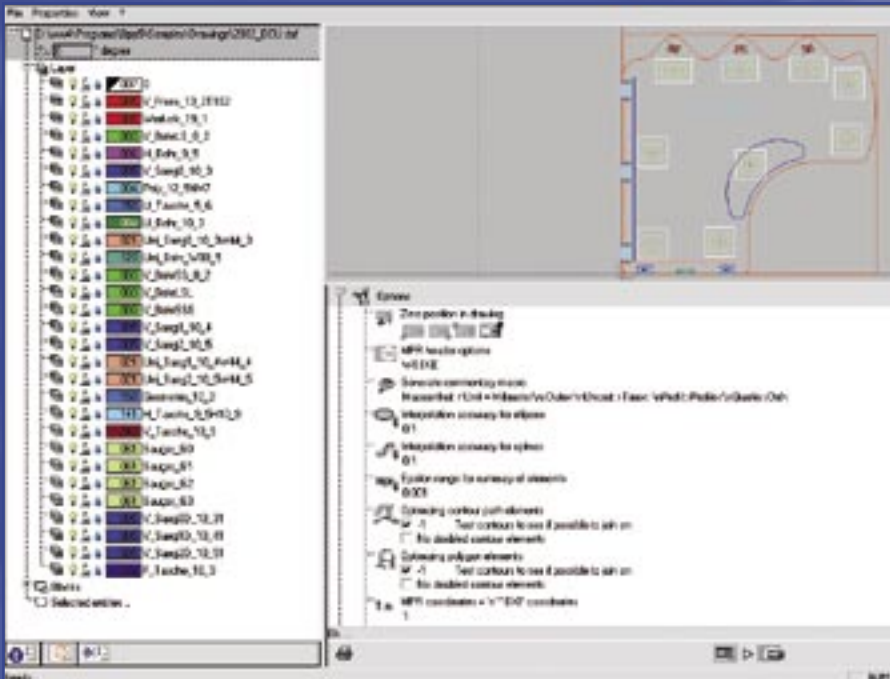
*wood**WOP** DXF Professional*

![woodWOP DXF logo]

wood**WOP DXF Basic + Professional**
Interface for CAD Data Import

What could be more useful than to exploit the design features of CAD systems and to choose the most direct route from design to production on a routing machine or a machining center?

The widely used, independent DXF format for the exchange of CAD drawings is used as the basis for the generation of wood**WOP** programs.

With the aid of pre-set rules, standard information for wood machining can be obtained from the DXF files. Machining steps, e.g. drilling holes, can be assigned to the individual drawing layers. The machining steps are then generated automatically when the data is imported.

Highlights:
» Displays all layers and the DXF file blocks they contain
» You can choose elements to display the layout and the type of drawing element (e.g. line, spline, ellipse)
» Each wood**WOP** parameter can be controlled

Option:
» *Can be configured as required (Professional)* Special applications can be expanded. The conversion rules can be flexibly expanded as required for each machining type. As a result, almost all possibilities can be covered by wood**WOP**. Due to the one-off adaptation of the rules to individual requirements, it is not necessary to adapt CAD drawings to the import rules every time.

CAD Drawing

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*wood**Design***

wood**Design**
The new way to design and display furniture on screen

Transparent Representation

Internal Partitioning View

wood**Design** is a modern 3D design tool for the interactive design of cabinet furniture. Complete workpiece programs can be prepared in seconds.

wood**Design** allows you to program complete items of cabinet furniture instead of individual parts. The 3D display function ensures that the software is easy to use.

Cut lists are generated automatically for all components to be manufactured, including the related wood**WOP** programs.
wood**Design** enables the materials, fittings, connectors and basic design parameters to be defined individually.

Highlights:
» *Easy to use*
  With saved settings and selection of the technical design details from a clearly laid out menu
» *User-friendly data entry*
  Clearly laid out entry of combinations and materials with reuse of preset and saved values
» *3D display*
  The object is displayed on the screen and can be viewed realistically from all sides.

The Hettich catalog is delivered on CD with wood**Design**, with the option of integrating it in wood**Design**. The operator can then draw up a connector selection directly from the Hettich catalog. The option of selecting the required connector machining steps via wood**WOP** components also remains. If the Hettich catalog and wood**Design** are combined, the connector machining steps are generated by wood**Design**.
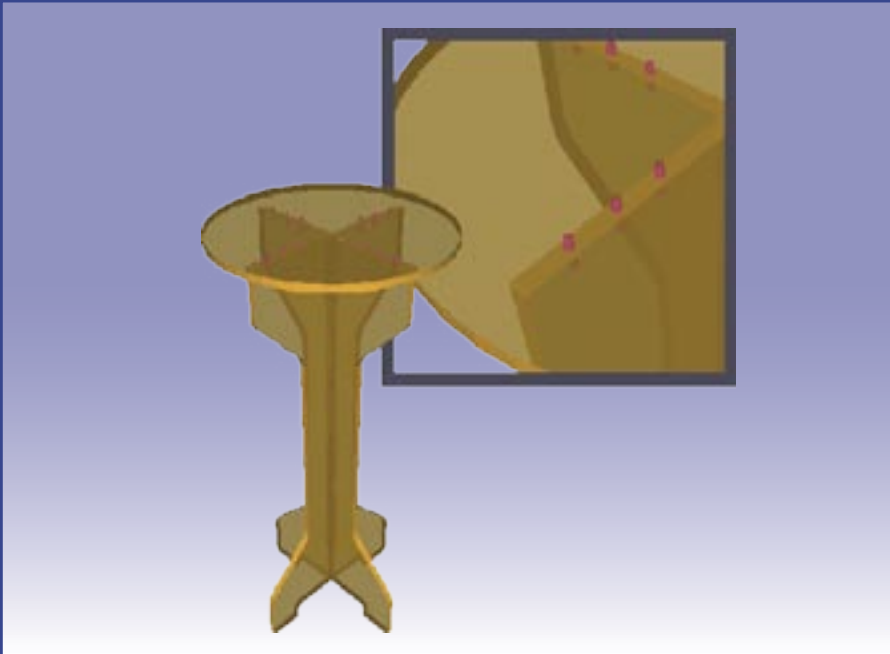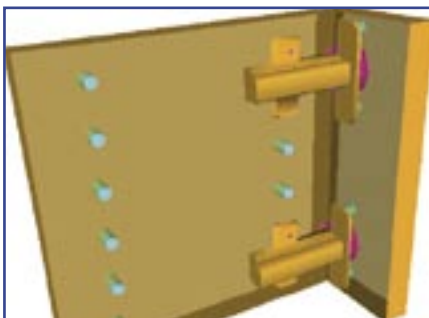
woodAssembler

wood**Assembler**

Virtual assembly of workpieces programmed in wood**WOP**

Experience with CNC machines has shown how important it is to check the individual components. Programming errors such as incorrect offset, spacing errors and incorrect co-ordinates cause high material costs and loss of machine time.

Modern technology makes it possible for you to check the components virtually and in this way find errors conveniently on the PC without the need to manufacture expensive prototypes. In this way you will save material costs and significantly shorten the development time for new items.

wood**Assembler** displays your projects in 3D and makes it possible to assemble components using the mouse. Your programs generated in wood**WOP** are used as the data source.

Highlights:
» Errors in the programming are identified immediately
» It is not necessary to manufacture prototypes
» Particularly effective for series production or high-value materials
» wood**Assembler** allows important information on the assembly of the components to be passed to the workshop. The machine operator can then easily see how the parts to be manufactured fit together
» Views can be zoomed and rotated as required

Partial View
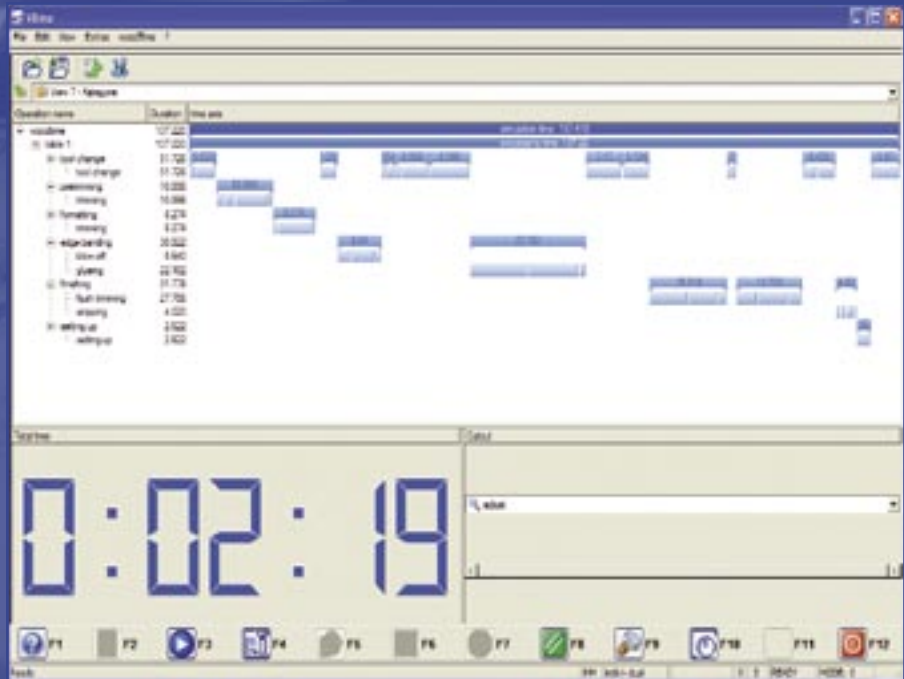
*wood**Time***

wood**Time**

## Production time simulation of wood**WOP programs**

wood**Time** is the first software module that makes it possible to simulate workpiece runtimes on a workstation computer in real-time and to display them sorted by processing step. The machine configuration used to calculate the times is the same as the one on your machine. This makes it possible to calculate the processing time for a workpiece much more accurately than was previously the case. In addition to acceleration and deceleration times, wood**Time** also takes into account complete tool change cycles and the approach and return times of your individual machines.

Highlights:
» Highly accurate calculation of times thanks to simulation of the original control data
» Graphic assignment to match that on the machine, enabling the simulation of individual-part and multiple assignment as well as individual or synchronized processing
» Graphic representation of all processing steps, sorted according to either user-specific categories or tools
» Simulation with error message display at the workstation, e.g. when exceeding the end of the software or when contour breaches occur

Program simulation with different machine configurations for optimum production planning
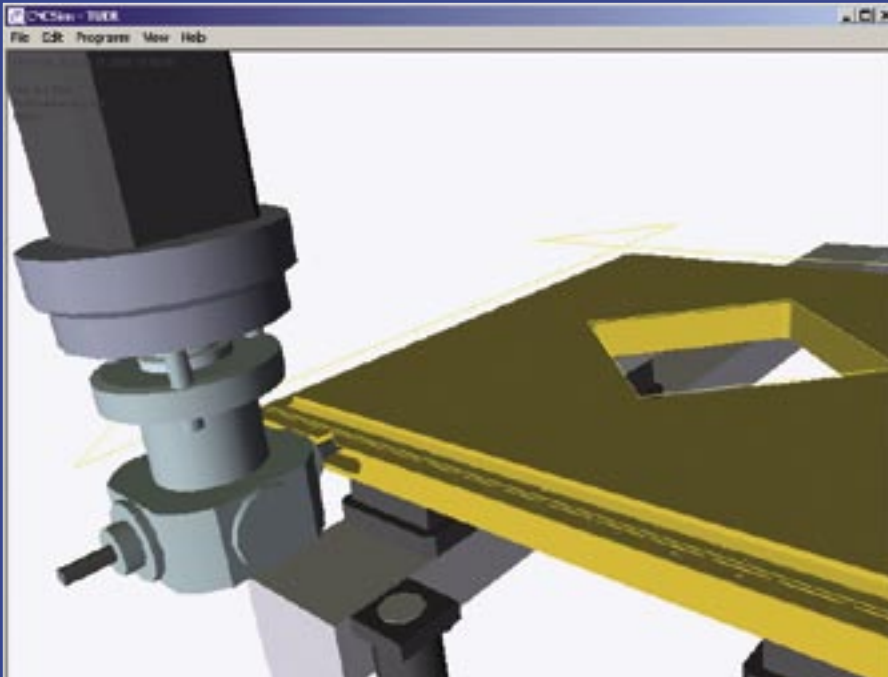
3D CNC Simulator

3D CNC **Simulator**

Software for graphics simulation and time calculations

The CNC Simulator enables CNC programs to be checked graphically.

The following are displayed:
» Workpiece
» Processing steps
» Unit layout that moves
» Beams and suction cup positions
» Production time

An automatic routine determines the machine configuration and tools fitted. The positions of suction cups and modules in the NC program are displayed and checked for collisions during through machining steps. The expected machining time is determined and displayed.

The programs can be loaded using a clearly laid out dialog box with file preview.

Advantages:
» As early as the preparation stage, the machining sequence can be simulated, optimized and calculated
» Expensive tests on the physical machine are not necessary
» Program errors are usually indicated immediately
» Vacuum suction cup positions are displayed and checked for collisions with tools during through machining steps

Highlights:
» Unit layout that moves
» Automatic reading of the machine configuration
» Machining time is displayed even without simulation
» Simulation available in different views
» Views can be zoomed and rotated as required
» After an NC stop the workpiece can be rotated
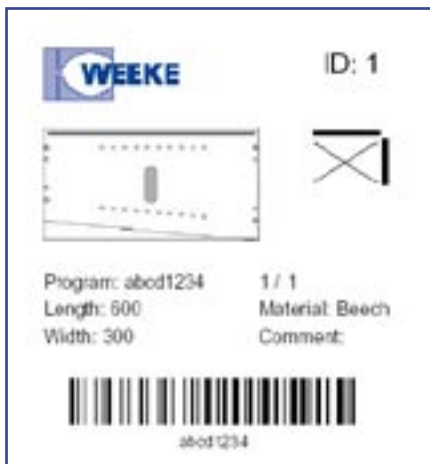» Convenient editor for tool profiles
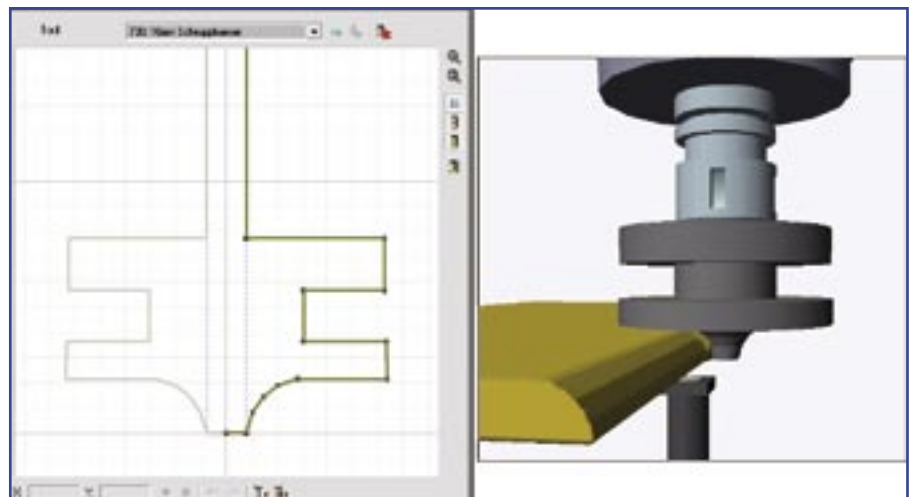
Tool Profile

OfficetoMachine

OfficetoMachine

ONLY FOR
WEEKE
MACHINES

*Barcode Label from **OfficetoMachine***

OfficetoMachine makes it possible to create and manage production lists for manufacturing on a PC worksta-tion. It allows you to save production sequences, target quantities, process-ing notes and up to ten variables to be transferred to the wood**WOP** program. The production lists created can subse-quently be transferred to the machine.

There is the option to extend import, print and export functions.

Import
Data from other systems can be imported into the production list from text files (with defined delimiter).
In **OfficetoMachine**, the position of the data in the text file can be deter-mined as required.

Print
The data of the individual positions in a production list can be printed using a special label printer or any other printer. The print layout of the labels can be selected as required. Informa-tion such as text, an illustration of a tool, a logo or different barcodes can be placed in any position.

Export
It is also possible to transfer production lists to wood**Nest Professional**. The data entry PRN file format is created.

Highlights:
» Import interface can be configured as required
» Versatile editor for the layout of the barcode label
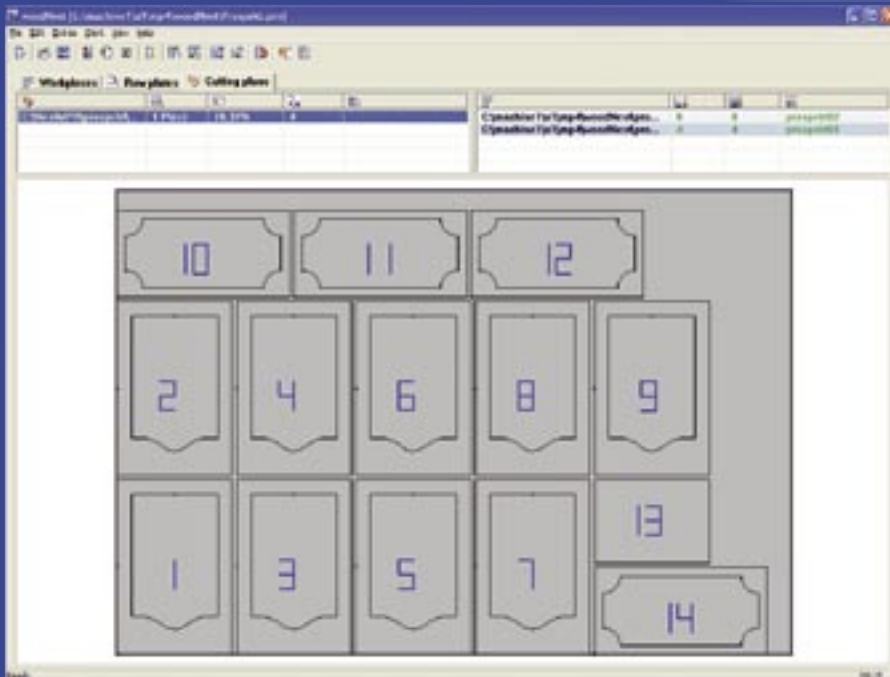
*wood**Nest** Professional*

wood**Nest Professional**
Software for nesting shaped parts

Using the nesting technique, batches are assembled by order and the cutting of the raw material optimized. Classic applications are boat and frame manufacture (upholstered furniture), caravan manufacture, MDF fronts and toys, and also the manufacture of furniture components to order. With wood**Nest**, cutting and machining are optimized in one program, i.e. complete wood**WOP** programs are imported directly, placed on an unprocessed panel and optimized. The nesting results are complete wood**WOP** programs including all machining steps, optimized according to travel ranges and tool changes. Combining cutting and final processing makes it possible to reduce material costs and to shorten the total processing time.

Highlights:

Approach and return routines
Data is read from the wood**WOP** program into wood**Nest** and taken into account during nesting.

Nesting result
Indication of the required unprocessed panels with waste display, and overview with required as well as actual number of all nested parts.

Variable piece lists
Standardized parts of varying dimensions can be defined in a variable piece list. The variable piece lists can also be used in a higher level ERP system via a defined interface.

Nesting a Panel on the BHP 200

wood**WOP Tools**
Software collection for CNC programming

wood**WOP Tools** represents a collection of software for making work easier during CNC programming. Whether you want to rout a logo, nest parts or manage your wood**WOP** programs or components efficiently, there is a software module available for each of these tasks. The software modules are optimally integrated into wood**WOP**.

Advantages:
» A collection of useful programs at an attractive price
» Easy to use
» Available in many languages.

woodType
Routing Text

wood**Type** is an easy-to-use text edi-
tor for wood**WOP**. With the aid of this
module, logos and text can be pre-
pared using Windows fonts and then
routed. The available editor functions
include: font, font size, text alignment,
text scaling, bold/italic.
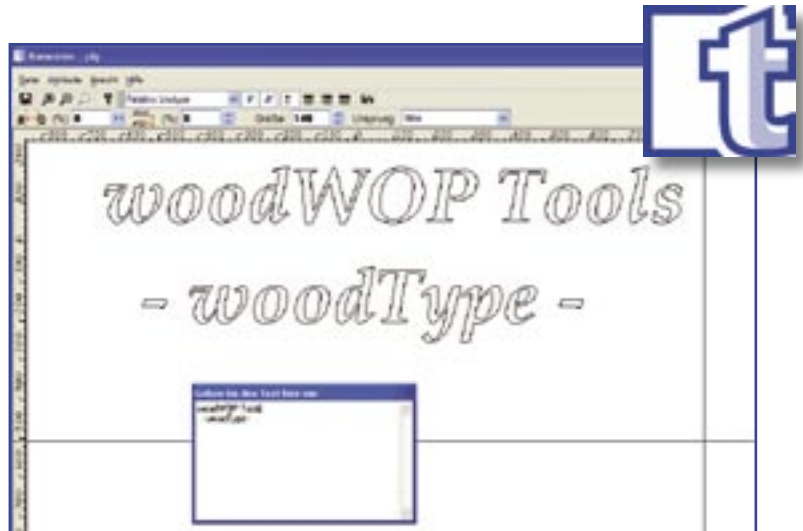
*wood**Type***

woodWOP Mosaic
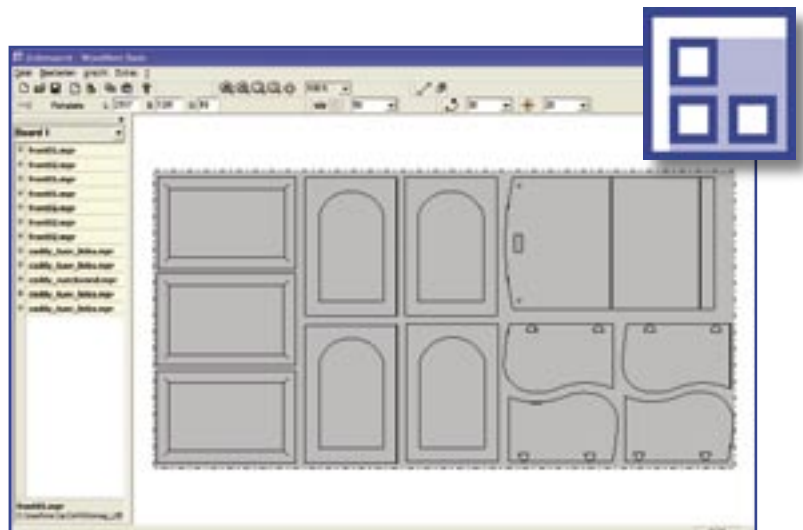File Preview and MPR Browser

To be able to effectively utilize an
increasing number of programs, a
graphic preview on file selection makes
the software considerably easier to use.
Using the MPR browser, wood**WOP**
files and entire folders can be managed
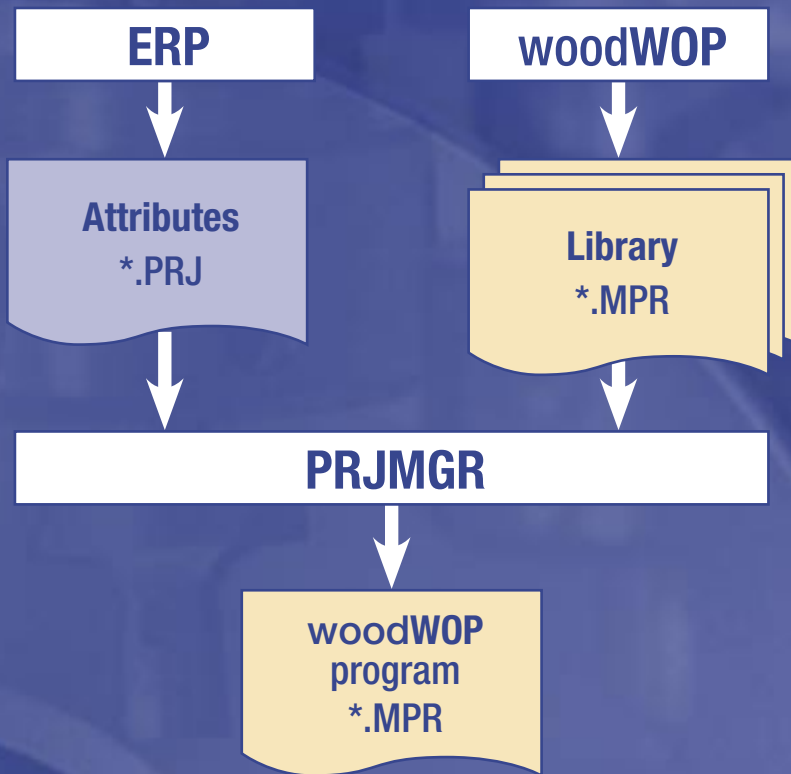graphically. Programs can be loaded or
added using Drag & Drop.
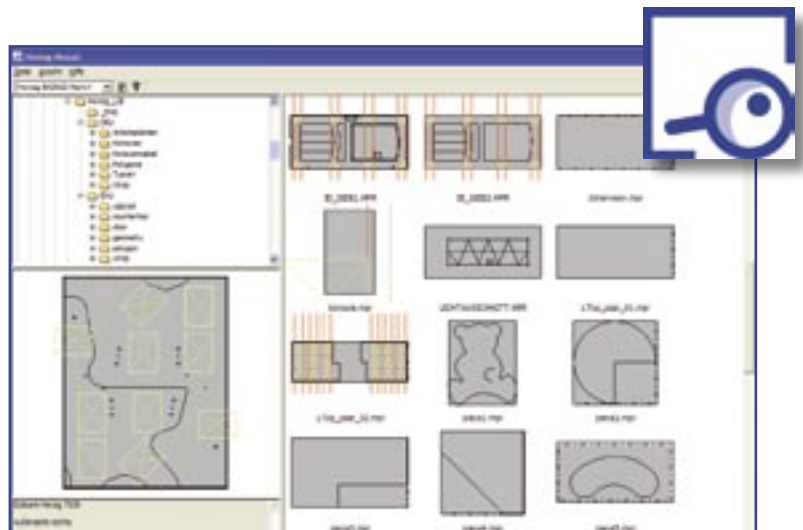
*wood**WOP Mosaic***

woodNest Basic
Software for Nesting Shaped Parts

While automatic solutions for indus-
trial applications have already been
developed (wood**Nest Professional**),
an elegant, straightforward solution
for one-off applications has so far
been lacking. This gap is now filled by
wood**Nest Basic**. wood**WOP** pro-
grams (individual parts) can be directly
nested manually (Drag & Drop). The in-
dividual workpieces can be positioned
and rotated using the mouse.

*wood**Nest Basic***

```
┌─────────────┐           ┌─────────────┐
│     ERP     │           │   woodWOP   │
└─────────────┘           └─────────────┘
       │                         │
       ▼                         ▼
┌─────────────┐           ┌─────────────┐
│  Attributes │           │   Library   │
│    *.PRJ    │           │    *.MPR    │
└─────────────┘           └─────────────┘
       │                         │
       ▼                         ▼
┌───────────────────────────────────────┐
│                PRJMGR                  │
└───────────────────────────────────────┘
                    │
                    ▼
            ┌─────────────┐
            │   woodWOP   │
            │   program   │
            │    *.MPR    │
            └─────────────┘
```

Project Manager
Interface to Industry Packages

This data interface allows an industry package or an ERP system to be connected to wood**WOP**.

After a variable piece list (order-specific parameters e.g. length L, width B etc.) has been transferred, the wood**WOP** programs for the individual components are generated fully automatically.

The basis for this connection is on the one hand a library with wood**WOP** components for the individual machining steps, and on the other hand a project file. The project file is an ASCII file in a specific format with all the attributes of the individual components.

The Project Manager assigns the variable values to the individual wood**WOP** programs (components) and generates new wood**WOP** programs fully automatically.
This makes it possible to generate one or even several components from a project file.

Highlights:
» Automatic generation of wood-**WOP** programs
» Automatic assignment of variable values
» Optimization of machining steps according to tool changes
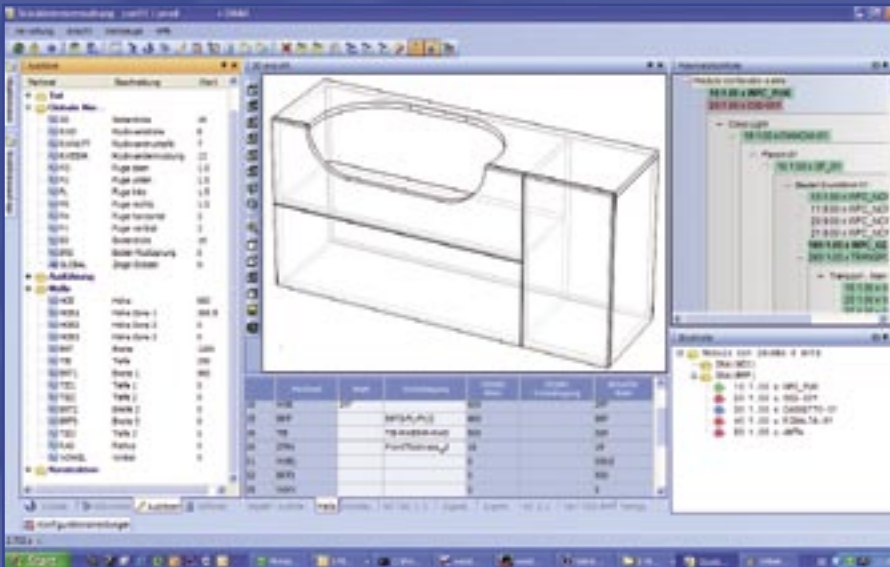
*wood**Process***

Examples of Applications

The interface makes it possible to connect to all industry software that is based on variable components. Typical applications include the field of cabinet furniture, door production and programming countertops.

Countertops
When programming countertops, the attributes of the countertop(s) are collected via the customer's PPS system. The results of the Project Manager are the individual wood**WOP** programs for the countertops, including all machining steps such as formatting, edging, corner joints, cut-outs and notches.
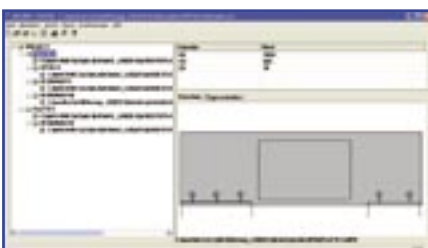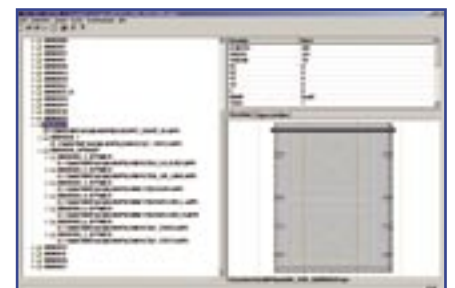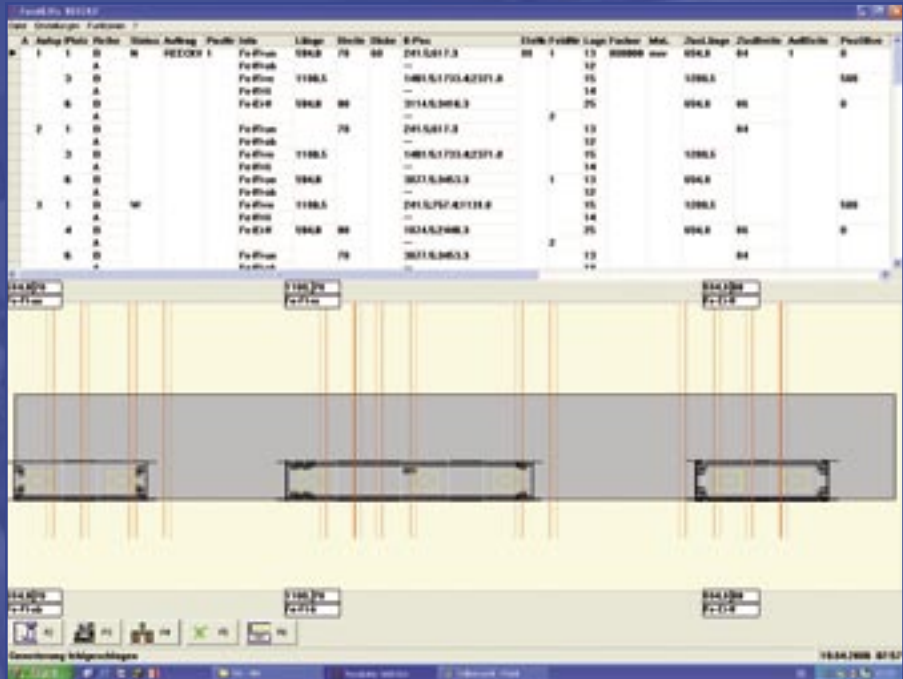

Door Production

All the essential attributes of the door can also be collected via a customer's PPS system. The machining steps are created in wood**WOP** as components. From these, the Project Manager creates a door panel, a frame component or a complete door, including all machining steps such as:

» Formatting/profiling
» Lock
» Installation drill hole
» Hinges
» Cut-outs
» Final processing for frames
» Strike plates
» etc.

Cabinet Furniture
The Project Manager makes it possible to connect with almost every type of PPS/ERP software used in cabinet furniture production. With wood**Process**, the HOMAG Group offers a complete industry solution for small and medium-sized companies. The process management system controls the entire process, from quoting, purchasing, creating production and delivery documents and providing programs for machine control, right up to settling the invoices. wood**Process** generates a project file for each order, which the Project Manager uses to automatically generate all components.

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FenALiVe

Window Interface
Connection to Window Industry Software

For efficient, cost-effective window production, a powerful industry software package is nowadays essential. In addition to window design, further modules are frequently available, e.g. for creating production lists, orders and quotes, or for providing calculation tools.

The window interface from HOMAG enables industry software to be seamlessly integrated into the machine environment.

From the automatic creation of all processing programs and dynamic table assignment to the display of the clamping positions, this high-quality integration offers numerous functions that guarantee successful window production.

To ensure optimum commissioning of the interface, the machine is run in for five days at the HOMAG factory in the presence of the customer and the software service provider. In addition, the installation at the customer's site is assisted for five days by a HOMAG systems expert.

Highlights:
» Automatic generation of all processing programs for window elements
» Optimum table assignment thanks to dynamic place assignment and pairing
» Automatic calculation of clamping positions
» Paper-free processing of parts on the machine thanks to work list control
» Project assistance by HOMAG systems expert
» Interfaces possible with KLAES, 3E, ProLogic and Adulo, among others
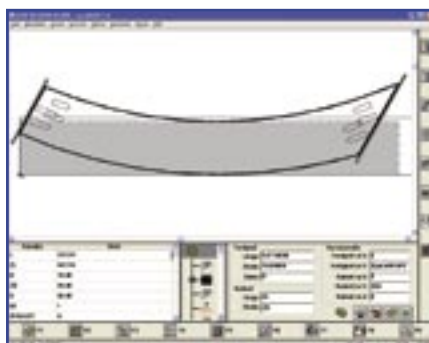
*wood*WOP

*wood*WOP
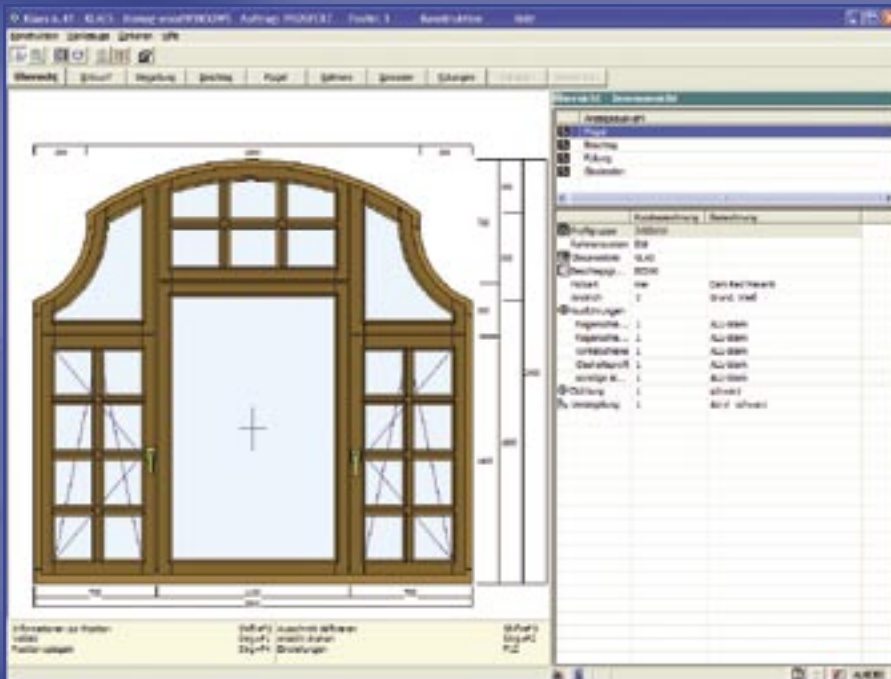
Window Design

wood**Windows**
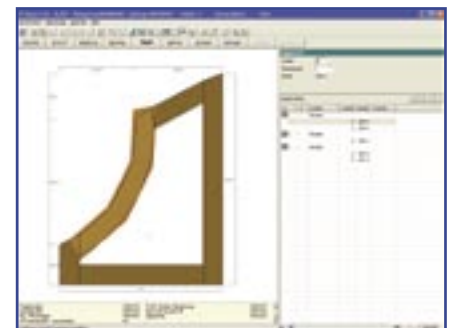## Software for window design

ONLY FOR **HOMAG** MACHINES

wood**Windows** is a window software package from Klaes designed specially for HOMAG machines to be used in individual window design including program generation for HOMAG machining centers.

Effective and efficient operation — two features that have already been implemented in wood**Windows**. With wood**Windows**, all windows are standard windows and can be fully machined on the HOMAG machining center, including all drilling, formatting and profiling, even when they involve complicated designs, extensive major projects or individual small volume production. To increase the efficiency of the preparatory work, wood**Windows** generates order overviews with diagrams, production lists with integrated profile cutting lists, detailed window diagrams and glass procurement lists.

Highlights:
» Quick and easy window creation via type lists or free window design
» Design of all common window forms such as rectangular, triangular, round arches, segment arches, three-center arches etc.
» Complete with the master data of the window system (IV68, IV78 or wood-aluminum) and the fitting system of the most popular manufacturers
» The data for the complete processing of individual window parts is transferred to the HOMAG machining center at the push of a button
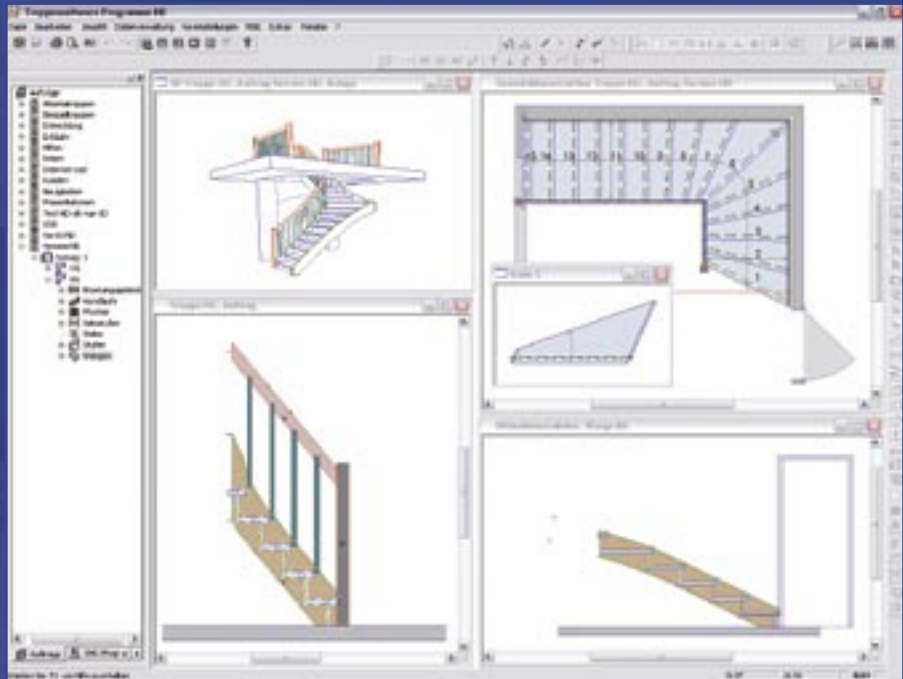» Can be extended to the ERP system by upgrading to Klaes professional

Breakdown of Segments
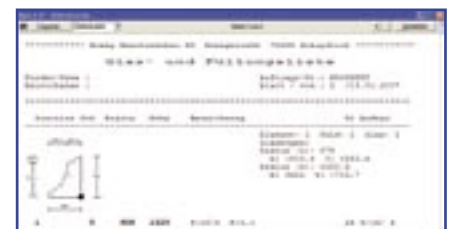
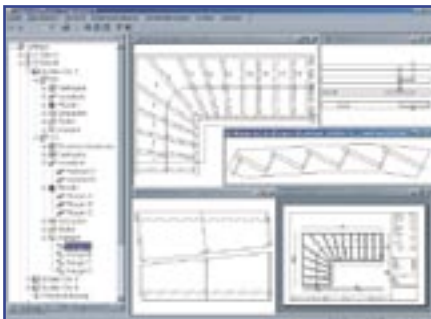*wood**Windows** — Glass and Filling List*

wood**Stairs**

wood**Stairs**
Software for stair design

Drawings

3D View

An important factor for the cost-effective manufacture of stairs on a CNC machining center is straightforward, quick program preparation. wood**Stairs** is a stairs software package from Compass specially designed for HOMAG and WEEKE to be used in the technical creation of stairs, including data transfer to machining centers.

With more than 1000 installations worldwide, the Compass stairs software package is one of the most effective software solutions on the market.

Highlights:
» Quick and easy stair design using layout variations
» Stair and platform offsets can be constructed
» Braced and/or saddled string stairs
» Data transfer to the processing center for machining steps for strings, handrails, posts, risers and balustrade parts
» Creation of drawings with dimensions of stair parts, piece lists etc.
» Can be extended to the ERP system by upgrading to the full version from Compass

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specialists develops, tests and of-
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