BMB 900 processing centres
powerProfiler 2

Windows, doors and more ...

Be on the safe side with HOMAG

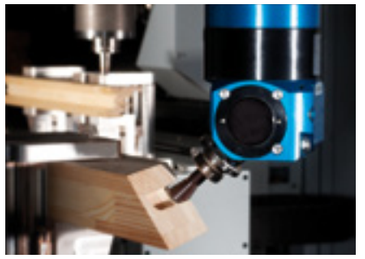
An investment in a new machine or plant should not be an experiment.

Place your trust in the competence, experience and reliability of a powerful partner – place your trust in HOMAG Holzbearbeitungssysteme GmbH (HOMAG).

- Competence and experience gained over more than 50 years in the manufacture of woodworking machinery
- Production of over 1,000 processing centres a year throughout the HOMAG Group
- A highly motivated workforce of over 5,000 employees worldwide producing high quality machines and plant from 12 different manufacturing sites

Latest technology for woodworking shops and high volume joinery manufacturers:

- BMB 900 gantry series processing centres available in serveral configurations and with an extensive range of options.
- The unique basic machine design with independent clamping systems and processing units forms the basis for high performance and flexibility
- Different processing operations such as sawing, drilling, routing, component measurement, and 3D machining can all be combined (simultaneously) to yield a high output flexible processing centre.



Precise mitre cuts and corner connections.

The universal clamping systems can be used simultaneously – for instance to produce front doors or semi-circular arches.

Complete processing of single parts.

Contents

Get to know us

Complete solutions for the entire woodworking sector – what HOMAG can offer you. For over fifty years, our customers have enjoyed the benefits of our innovative mechanical and plant engineering competence, starting with our CNC processing centres through production lines to complete plants.

For further information please see:
www.homag.com

www.youtube.com/homaggroup

HOMAG in support of education and training

Dipl-Ing. (FH) Gerhard Schuler (fourth from the left), cofounder of HOMAG and Honorary Senator of the Rosenheim University of Applied Sciences, presenting a processing centre to the University.

“Cobbler, stick to your last”

The roots of the HOMAG corporation are planted firmly in the field of mechanical engineering for the woodworking sector. Since as far back as 1962 at the Hanover Industry Trade Fair, our company presented its first product innovations, including a frame press for window construction. By focusing consistently on woodworking, a small team of just 5 turned into an international workforce numbering over 5,000 over a period of more than 50 years.

HOMAG Engineering

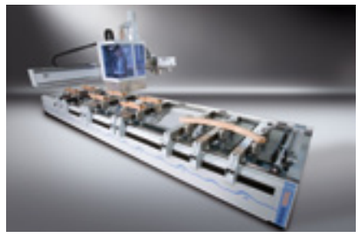
A team of over 50 experienced woodworking and mechanical engineers plan and implement efficient production plants for window construction, door and furniture production around the world.

Production cells for window and door processing

In order to increase output, for instance by utilization of machines during break times, the HOMAG Group includes subsidiaries which specialize in robot handling and storage/transport systems.

Processing centres for over 20 years

Window production is shaped by batch size 1 production, short delivery periods and high quality expectations. HOMAG customers benefit from experience gathered over 10,000 delivered CNC processing centres around the world.

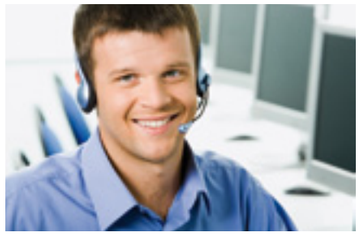


At home with window construction

HOMAG has been active in the field of window construction for over 30 years: with profile wrapping, complete processing in single part production and sanding technology. HOMAG supports a wide range of associations, interest groups and institutes.

Worldwide service

Over 70 sales partners and sales companies around the world provide over 400 service technicians on site, ensuring a high level of machine availability.



Software and control

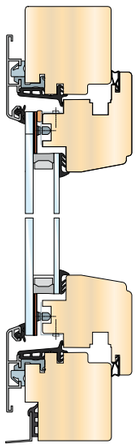
As a graphic user interface with over 20,000 successful installations, wood**WOP** stands as the woodworking industry standard. Used in conjunction with the HOMAG Group’s **power**Control system, it provides extreme machine operating simplicity and remote diagnosis down to the lowest component level.

Windows: The perfect symbiosis of design and functionality

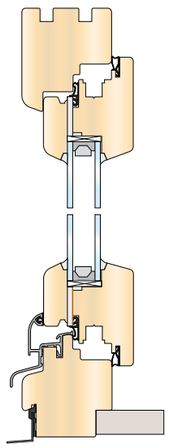
Windows are the eyes of a building – a claim which applies particularly to our expectations of modern architecture.

HOMAG offers a selection of highly flexible processing centres designed to address the future functional design characteristics of window systems, such as:

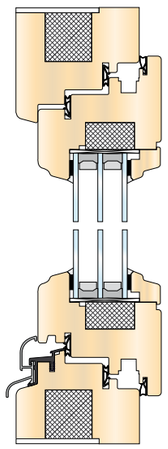
- Greater profile depths of up to 150 mm (optionally 180 mm) for greater insulating glass thicknesses and improved values of insulation.
- Different materials such as insulating core made of PU or facings made of purenit
- Conservatory and facade manufacture in multiplex or other materials
- Integration of functional assemblies such as fans, alarm system contacts etc.
- Profiling door panels



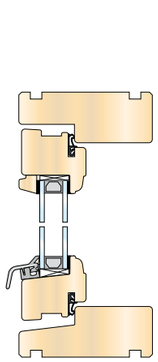
Wood-aluminium window system



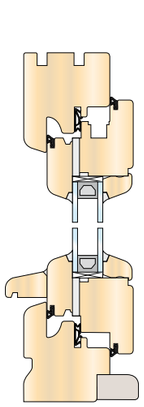
Softline window system



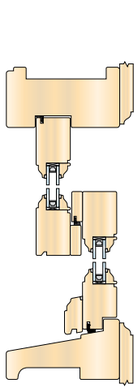
Eco home window system



Danish window system



Spanish window system



Sliding sash window system

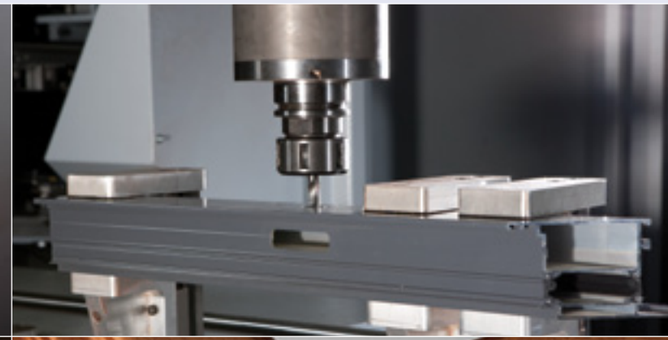
Individually designed door element

Different climatic zones, statutory requirements and traditions are reflected worldwide in a wide variety of different window systems.

HOMAG is able to call on experience from over 30 countries, which several hundred window manufacturers are already benefiting from.

Change of rebate

CNC processing centres with contour-precise interpolated movements together with tool profile splitting makes product features possible which would normally associated with the craftsman – with the added benefit of total efficiency.

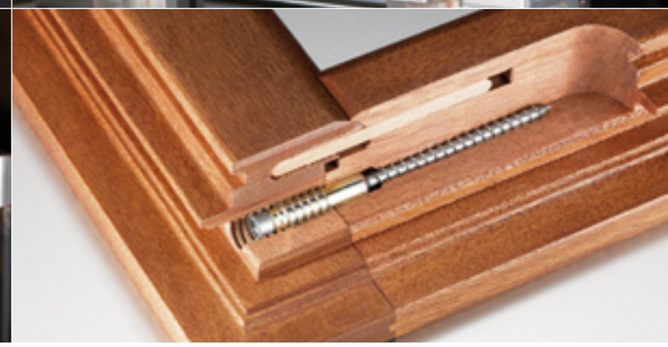


Material mix

Whether wood, wood composite materials, plastics or aluminium – HOMAG CNC processing centres are equipped to deal with the material mix of the future.

Glazing bar production

Depending on customer and market demands, glazing bars are initially trimmed, finish profiled (where required in a rebated design) and cut to length. The complete processing of semi circular arched windows on HOMAG processing centres in particular offers outstanding quality and cost benefits.



Corner connections

Whether mortise and tenon, counter, dowel or mechanical corner connections – HOMAG processing centres provide the assurance of extreme precision. This is the essential requirement for complete single part processing and subsequent surface treatment of single components.

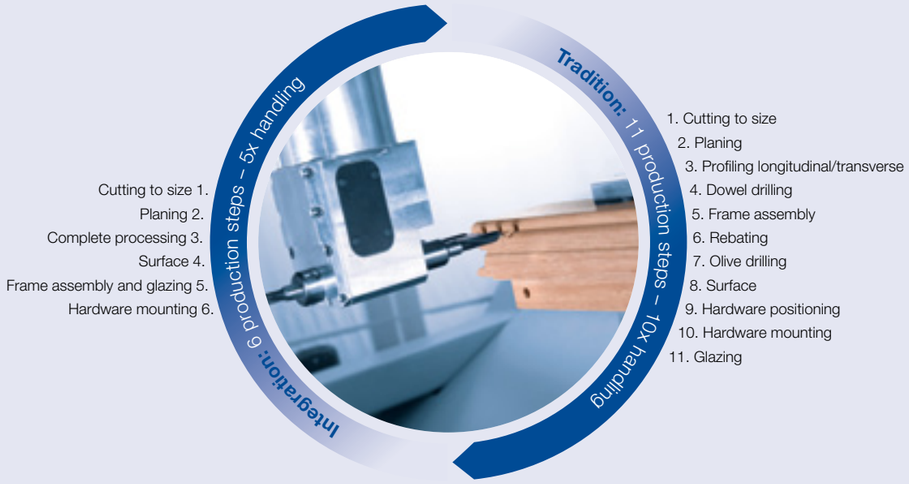
Economy through process integration and flexibility

Flexibility provides the assurance of:

- Optimum investment security by allowing adaptation to tomorrow's products
- Greater machine capacity utilization due to the production of windows, doors, conservatories etc. on a single machine
- Non-standard elements are produced using the same technical method as standard elements with the same delivery periods
- "Incomparable" products generating better yields

Combination of work steps with HOMAG CNC processing centres for:

- Minimal part handling
- Minimal sorting work required
- Minimal part damage
- Minimal production engineering costs
- Greater precision
- Reduced set-up time
- Fast reworking of damaged workpieces
- Lower space requirement



To the finished single part in just one step

Just one step takes you from planed timber to the finished single part ready for surface coating.

Front door production

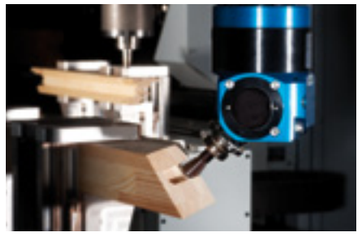
The ability to process complete front doors increases supplier independence and scope for profit by implementing unique design possibilities.

Upright and transom constructions

Complete facade elements and conservatories can be produced together with single window components as part of one production order.

Curved panels

High-precision, traced trimming using the interpolating 5-axis trimming spindle DRIVE5C+ opens up whole new scope for design.



Semi circular arches

The complete processing of arches with an inside measurement of up to 1,300 mm in a single piece reduces production times and enhances quality (no retouching required at the joints). Naturally including the correct fitting glazing bar.

Hardware recess routing

All routing operations for hardware, sensors, and connecting components such as shutter rails or jambs etc. are executed at the optimum speed and feed rate depending on the wood type and grain direction.

Lift and slide doors, windows for conservation projects

Whether large-scale lift and slide doors with cross sections of up to 300/150 mm or sash bars and other sash components with cross-sections below 50 mm – everything can be fully automatically processed – even with a shoulder to shoulder dimension of under 170 mm.


HOMAG
BMB 923

BMB 900 power**Profiler** 2 **– more than “just” windows**

5-axis technology

Routing spindles with interpolating fifth axis reduce unit costs and enhance flexibility.

Drilling technology

Drilling technology specifically tailored to the needs of window construction with additional trimming motors helps reduce processing times. This is where the expertise of our subsidiary BENZ is brought to bear. Patented technology such as mechanical spindle clamping and speeds of up to 7,500 rpm ensure fast processing operations also in hardwood.

power**Beam with ultra-rigid clamps**

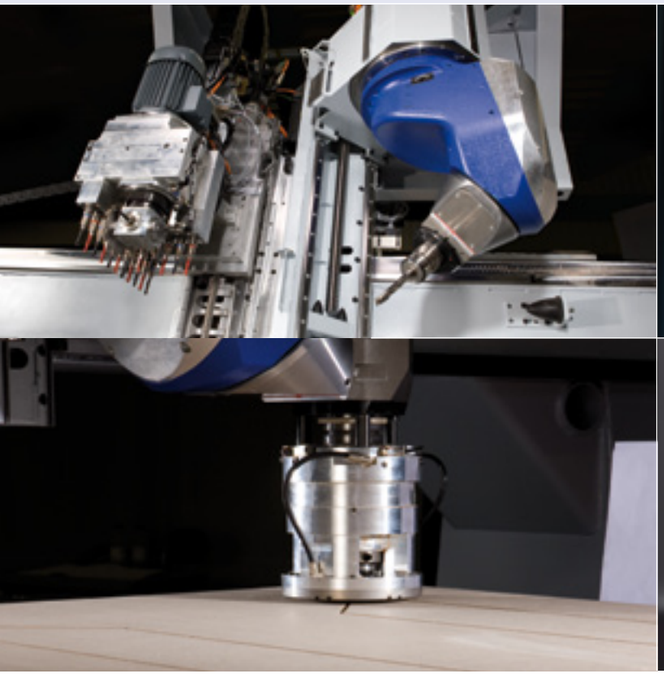
Optimum single part processing quality without the need for additional finishing processes for surface coating of single parts is assured through the use of ultra-rigid clamping elements. These are mounted on carriages (power**Beam**) with 2 drive axes each. Depending on the profile and part width, the clamping depth is precisely controlled also when reclamping.

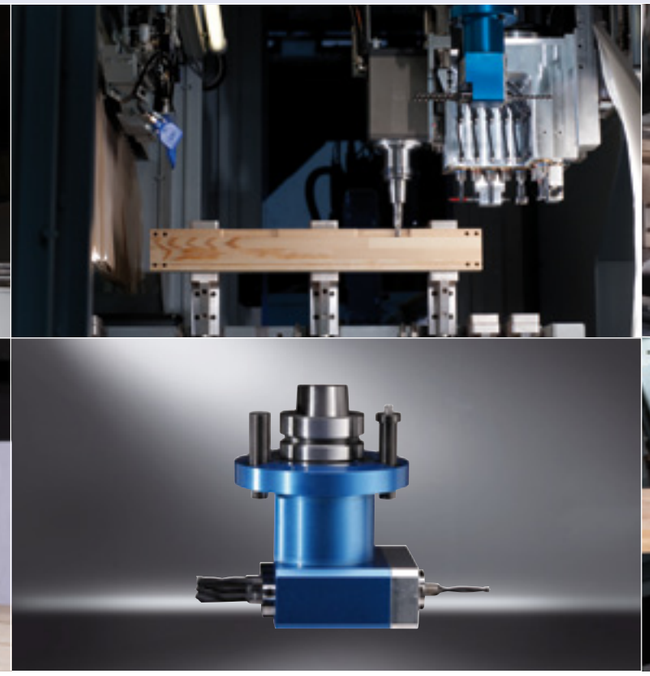
Consoles with vacuum system

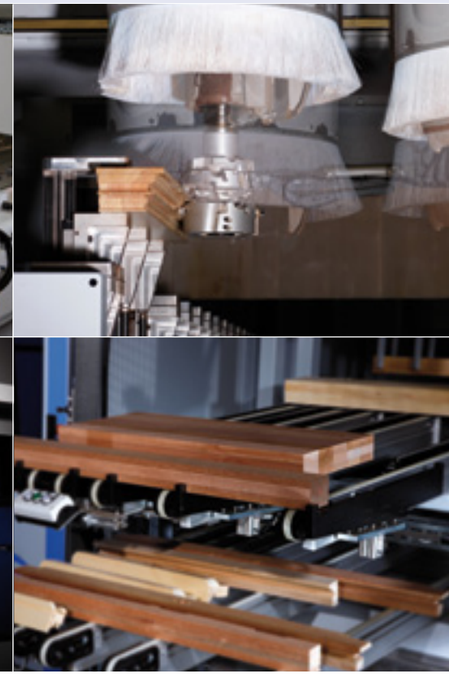
Consoles with integrated vacuum transfer are simply pushed out of the park position to the two carriages (power**Beam**) for front door production. Alongside vacuum suction cups, pneumatic clamps can also be used for different workpieces.

Optimum chip disposal with chip**Guide**

In order to capture the high volume of chips efficiently even with low suction output, the (chip**Guide**) system is used where required.







Flexible processing unit technology

Different units can be used and also retrofitted to upgrade the functional scope of the machines. For example for sanding or traced trimming of decorative grooves in front doors.

For more detailed information, please refer to our unit and clamping technology catalogue

Projection laser

For optimum raw material utilization, semi circular arches are aligned in accordance with projection of the workpiece contour with the aid of a contour laser.

Tool changer

Different tool changers with a capacity of up to 306 slots are designed on a modular basis, with several trimming spindles able to access the same tools. Access to the multi**Chain** tool store is ergonomically positioned at the front of the machine.

Intelligent workpiece handling

The workpiece storage units are available with different capacities. An integrated workpiece measurement system prevents interruptions and damage caused by incorrectly positioned raw components.
A gripper with transfer function allows up to 6,000 mm long parts to be processed with maximum space savings (infeed and outfeed in one area).

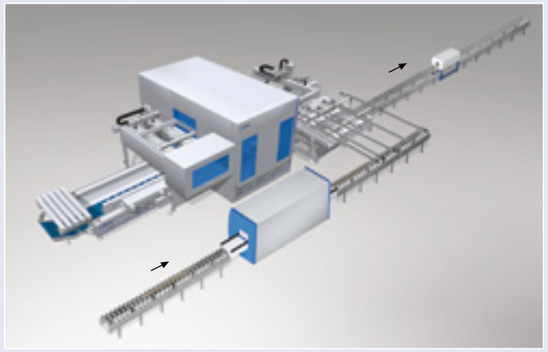
Scaleable output

Up to four independent processing units with drilling units and trimming spindles can be mounted. Spindle outputs of up to 28 kW and variable speeds of up to 30,000 rpm permit high hogging outputs and optimum processing quality.

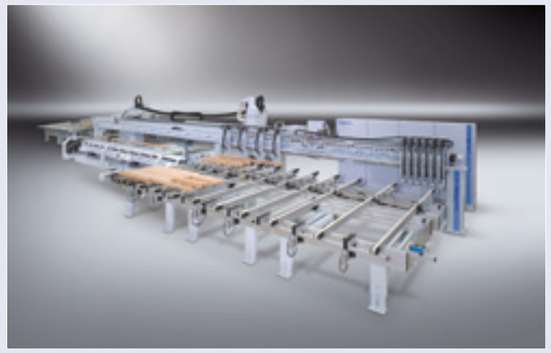
Part identification

Different part identification variants for automatic program accessing or for further-reaching processing steps are available to cater to the production planning methods of the customer.

Plant engineering par excellence



By linking up with a planing machine and flood channel, personnel costs can be additionally reduced.

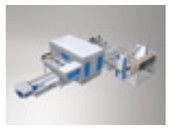


BOF 700 power**Profiler** processing centre

Performance stages for window and facade construction

BMG 500 processing centre

Up to 25 window units per shift

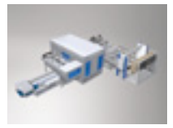


BMB 900 processing centre

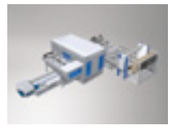
Up to 40 window units per shift

BOF 700 processing centre

Up to 50 window units per shift



BMB 900 processing centre



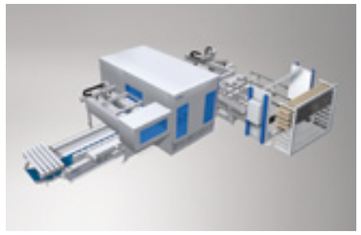
BMB 900 processing centre

Up to 80 window units per shift (redundant system)

BOF 700 processing centre

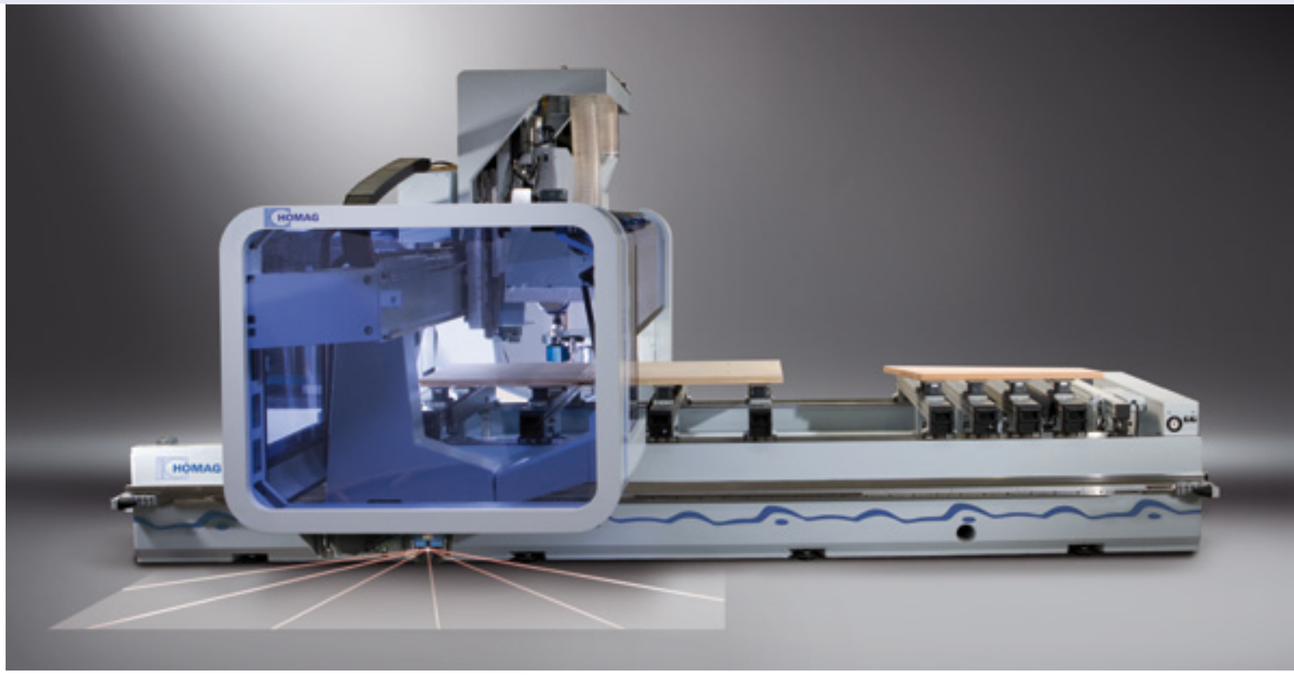
BOF 700 processing centre

Up to 100 window units per shift (redundant system)



Rack trolley with automatic workpiece infeed:

For low-manned production and even more processing cycles without the need for operating personnel.



Processing centre 500/600
The entry level class for flexible structural element production:

- Production of windows, doors and upright/transom constructions on a single machine
- 1–2 processing units
- Tool store with up to 98 slots
- Processing height of up to 500 mm, e.g. for conservatories

For further information please see:
www.homag.com/windows

BMB 900 power**Profiler** 2 **– success with a system**

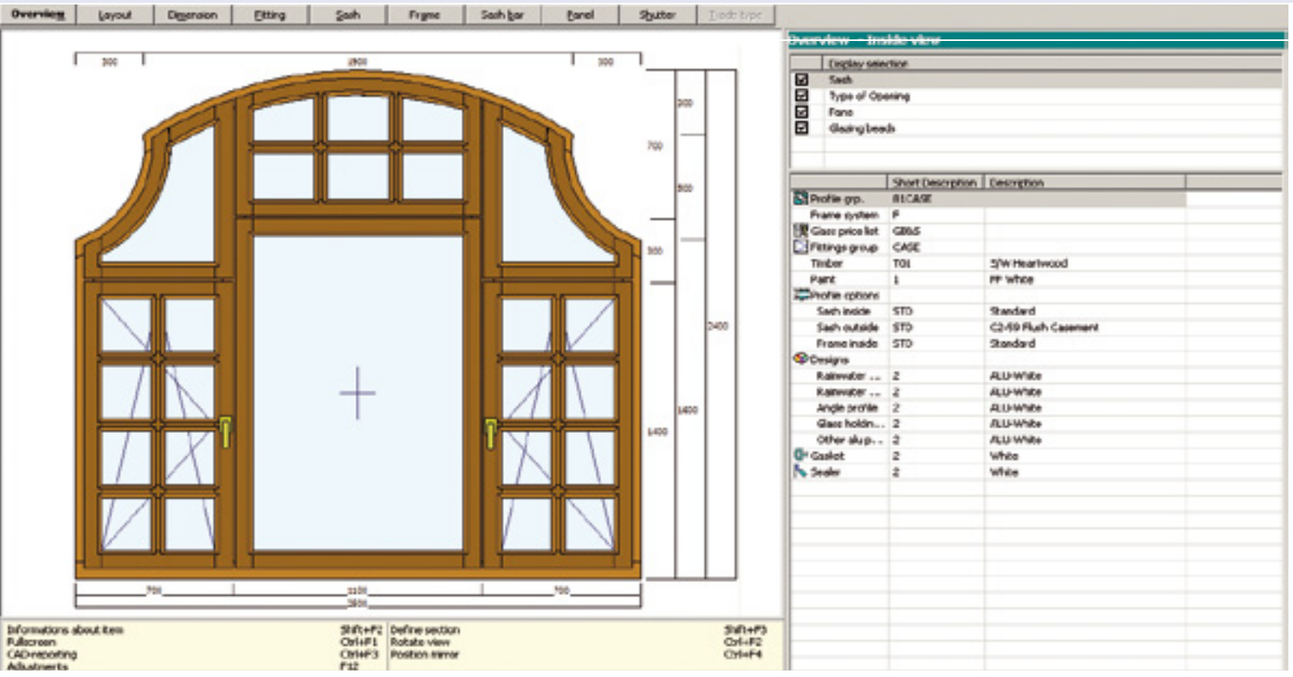
High-performance software: Simplifies work processes and maximizes profit

In addition to the “hardware” – our processing centres – we also offer matching software solutions. Alongside innovative programs for use across sector-specific boundaries, our range also encompasses product-specific software for window construction.

HOMAG window interface

With its window interface, HOMAG takes care of seamless integration of the machine into the IT environment. From the automatic generation of all processing programs through dynamic machine loading through to part identification: This sophisticated integration offers a wide range of functions for efficient window production.

For further information please see:
www.homag.com/software



Highlights

- Automatic generation of all window stage processing programs
- Optimum machine loading through dynamic space allocation
- Parallelization of production steps
- Paperless processing of parts at the machine using a production line control system
- Inclusive of**woodWOP**: the CNC programming system in the HOMAG Group – ideal for instance for programming doors or non-standard window parts
- Project support by competent HOMAG Engineering specialists
- Wide-ranging interfaces to KLAES, 3E, ProLogic, Adulo, DDX etc.

Tool management

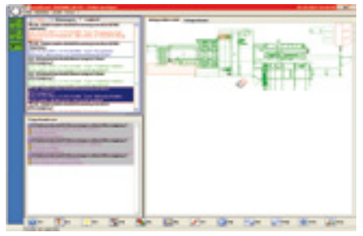
- Automatic detection of tools during set-up by means of data chip
- Synchronization with tool database
- Avoidance of operating errors
- Reduction of costs
- Employee protection

wood**Scout – help in your own language**

- Optional high-performance diagnostic system
- Graphic display of the fault location at the machine
- Easily understandable plain text error messages in different languages
- Learning capability through the assignment of root causes and remedial actions (expert knowledge)

wood**WOP DXF import interface for CAD data import**

- Automatic generation of wood**WOP** programs on the basis of CAD drawings
- Assignment of processing operations using layer names
- Using DXF Import professional, all wood**WOP** parameters can be defined using adjustable conversion rules and transferred to wood**WOP**

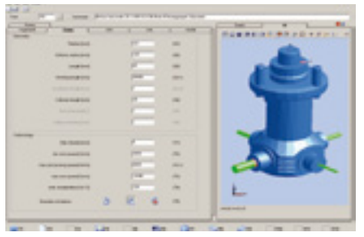


Tool service life determination

- Module for determining and logging tool service life
- Machine availability and workpiece quality are enhanced by the timely exchange of tools
- Cost reduction through optimized planning of tool deployment

Machine data acquisition MDA – for a productive environment

- Registration of piece numbers and ACTUAL operating times at the machine
- Integrated maintenance instructions for the optimum time and quality-based planning and execution of maintenance work
- Optional professional version permits detailed breakdown and logging of registered data



Graphic tool database

- Dimensioned graphics for simple set-up and management of tools and units
- Spatial depiction of tools

BMB 900 power**Profiler** 2 **– Innovations which pay dividends**

Faster, more cost-effective, more successful. These are key objectives not just in the field of structural element production. And because our processing centres will permit you to manufacture top-quality products in record time with minimal cost outlay, they place you streets ahead of the competition – with no need to worry about what the future holds.

Time is money

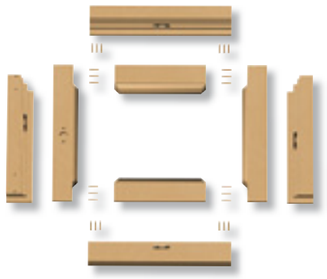
Use the table to simply calculate the time benefit for your production. Bottom line: A clear, unmistakable gain for you.

1-sash window 130/130 cm (8 parts)	Current time requirement	Tomorrow with HOMAG BMB 900 power**Profiler**	Additional streamlining potential
Cutting to size	appr. ..... min.	appr. ..... min.	One employee can be deployed for parallel cutting to size, planing and operation of the BMB 900 power**Profiler** (depending on the degree of automation).
Transport/Handling	appr. ..... min.	appr. ..... min.	
Planing	appr. ..... min.	appr. ..... min.	
Transport/Handling	appr. ..... min.	appr. ..... min.	
Profiling longitudinal/transverse	appr. ..... min.	appr. 12 min. for the complete range of cutting processes	
Transport/Handling	appr. ..... min.		
Dowel hole drilling	appr. ..... min.		
Transport/Handling	appr. ..... min.		
Grip hole and corner bearing drillholes	appr. ..... min.		
Transport/Handling	appr. ..... min.	appr. ..... min.	
Frame assembly	appr. ..... min.	appr. ..... min.	
Transport/Handling	appr. ..... min.	appr. ..... min.	
Rebating	appr. ..... min.	Are already performed on the BMB 900 **power**Profiler	
Transport/Handling	appr. ..... min.		
Non-standard trimming operations on window frame	appr. ..... min.		
Transport/Handling	appr. ..... min.		
Surface	appr. ..... min.	appr. ..... min.	Efficient single part coating is possible due to single part complete processing.
Transport/Handling	appr. ..... min.	appr. ..... min.	
Hardware mounting	appr. ..... min.	appr. ..... min.	Appr. 20% faster, as all positioning holes and trimming operations already take place on the BMB 900 power**Profiler**.
Transport/Handling	appr. ..... min.	appr. ..... min.	
Glazing	appr. ..... min.	appr. ..... min.	
Total production time	**appr. ..... min.**	**appr. ..... min.**	

Technical data

Precise recess trimming operations for striking plates and all hardware components guarantee efficient mounting of hardware parts.

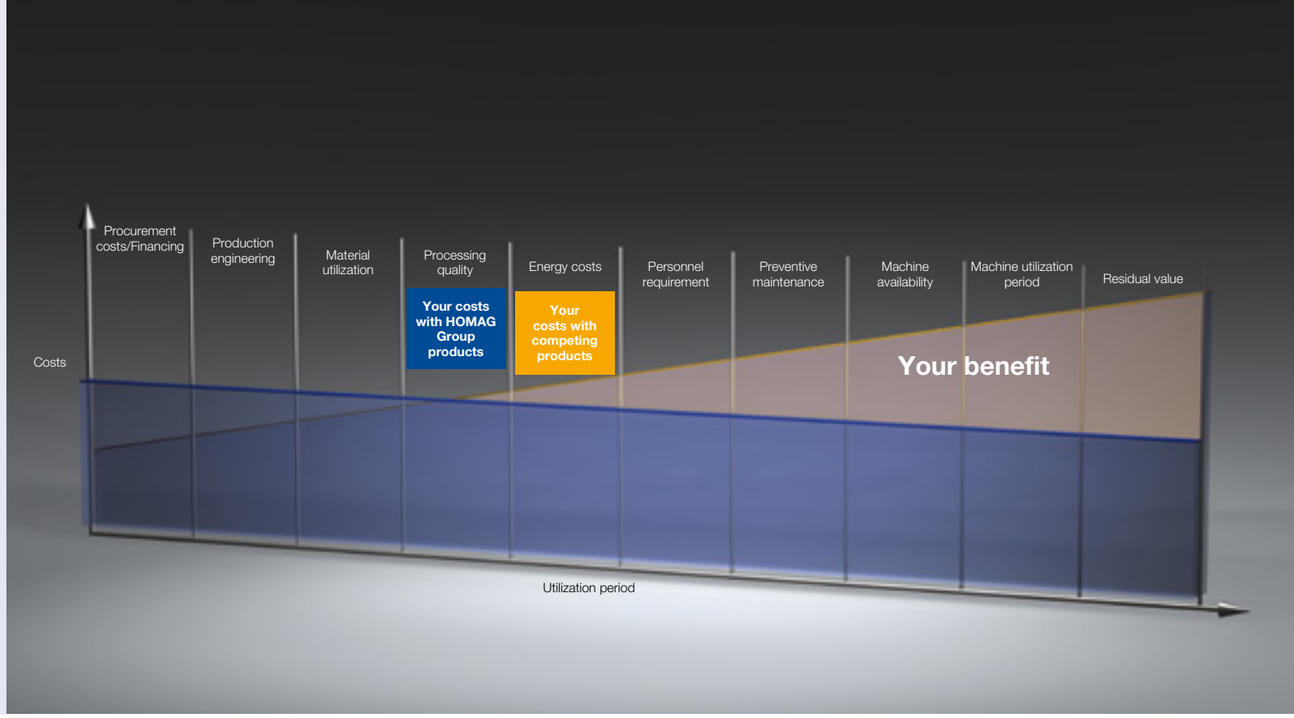
New corner connections permit additional material and time savings.



Working dimensions		Additional streamlining potential
Max. processing length [mm]	6,000	A lower energy requirement lowers the strain on the environment and increases your yield.
Max. processing width [mm]	1,300	
Max. processing height [mm]	150 (optionally 180)	
Suction output [m^3/h]	appr. 6,000–12,000	
Total connected load [kW]	appr. 30–66	

Wide-ranging possibilities	Current time requirement	Tomorrow with HOMAG BMB 900 power**Profiler**	Additional streamlining potential
Semi circular arched window component	appr. ..... min.	appr. 10 min.	Other bar-shaped wooden components (such as such as conservatory rafters) can also be economically processed.
Front door leaf processing	appr. ..... min.	appr. 10 min.	
Individual bar processing (e.g. upright/ transom constructions)	appr. ..... min.	If required, we can calculate concrete processing times for your products.	

For further information please see:
www.homag.com/services



LifeCycle Cost reduces unit costs

Piece cost reduction through optimum financing

- HOMAG Finance offers optimized financing concepts based on individual business administration requirements
- The outstanding value stability of HOMAG processing centres offers benefits in terms of leasing and subsequent replacement investment

High level of processing quality “without” finish processing

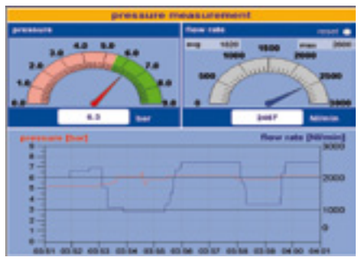
- Using tool parameters stored in a database, processing parameters per wood type, and variable rotational speeds and feed rates, each workpiece is hogged under optimum conditions. This results in a longer tool life and improved processing qualities
- Vibration sensors in the working spindles automatically reduce feed rates under high levels of stress (such as knots in solid wood) or in case of unbalanced tools
- The tool service life determination software optimizes tooling costs and workpiece quality

Reduction of labour costs

- Automatic part handling, e.g. with robot systems or direct feed from rack trolleys
- Fast, simple operating capability of machines

High degree of machine availability

- World-wide service reduces machine downtimes
- TeleServiceNet – our “eye” into the machine eliminates the need for costly service callouts
- wood**Scout** diagnostic software – intelligent self-help for all machine operators
- **safe**Scan – the no-contact safety system without mechanical components susceptible to faults



Low energy costs

- Intelligent stand-by operation reduces energy costs during break periods or in case of partial capacity utilization by up to 10 %. This saves up to 8,000 kwh of power a year*

* Based on a BMB 922 power**Profiler** in single-shift operation

- Compared to conventional window lines, where in some cases as many as 20 different units are operated and extracted simultaneously, in the BMB 900 only two units are operated at the same time
- All drive systems comply with energy efficiency category IE 2
- Optional energy recovery of the shaft drive systems
- Optional measurement and visualization of current consumption data from compressed air extraction and flow to optimization of overall energy consumption

Machine utilization period

- Facility for continuous upgrading of processing centre functionality using standardized interfaces ensures compliance with future production requirements
- The HOMAG conversion department offers solutions to address major conversion requirements, ensuring a high degree of investment security over years

Effective production engineering

- Links to trade-specific software packages and CAD/CAM systems reduce program generation times and make use of already existing data

Preventive maintenance

- Regular inspections and preventive maintenance help avoid machine faults and extend service life
- MDA software informs the machine operator about scheduled maintenance requirements and provides cost transparency for calculation

ecoPlus

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A VDMA Campaign

A member of the HOMAG Group

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