

Processing centres BMG 300



Member of the HOMAG Group



HOMAG Holzbearbeitungssysteme GmbH

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HOMAG: Productivity from the word go

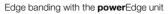
Anyone investing in new woodworking machines expects a solution to their specific production assignment. It has to be productive and flexible, and offer extreme availability. And also go on supplying perfect results for a long time to come. HOMAG processing centers offer superior technology and individual equipment for highly efficient production. Our service packages and global aftersales support ensure the availability of your plant or machine over its entire life cycle and offer outstanding investment security.

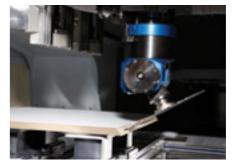
- Over 50 years of experience in machine and plant engineering
- 12 locations around the world with a workforce totaling over
- Production of over 1 500 processing centers a year throughout the HOMAG Group
- Superior technology and high-performance features well in excess of the industry standard

High technology for woodworking shops and industrial producers:

- Different process technologies such as sawing, edge banding, hardware mounting, measurement processes and 3D processing can all be combined to ensure a truly future-proof investment
- High standard of processing quality due to heavyduty base frame and stable moving gantry.



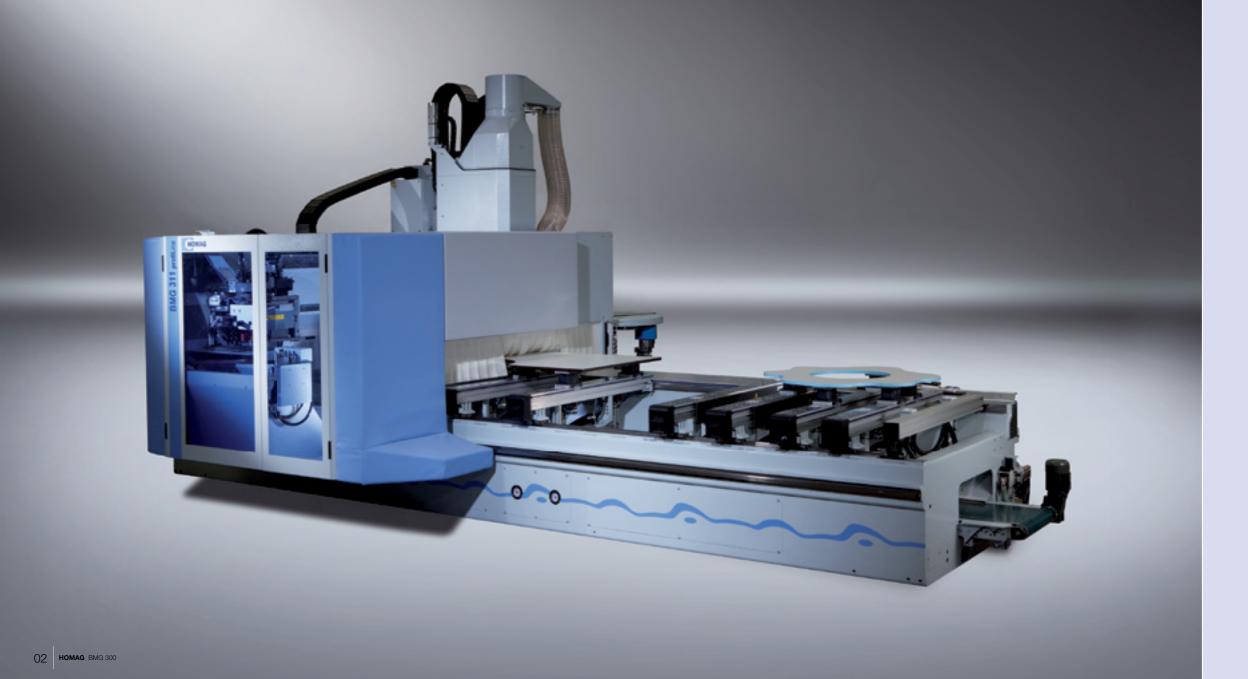




Free angle processing with the FLEX5+ unit

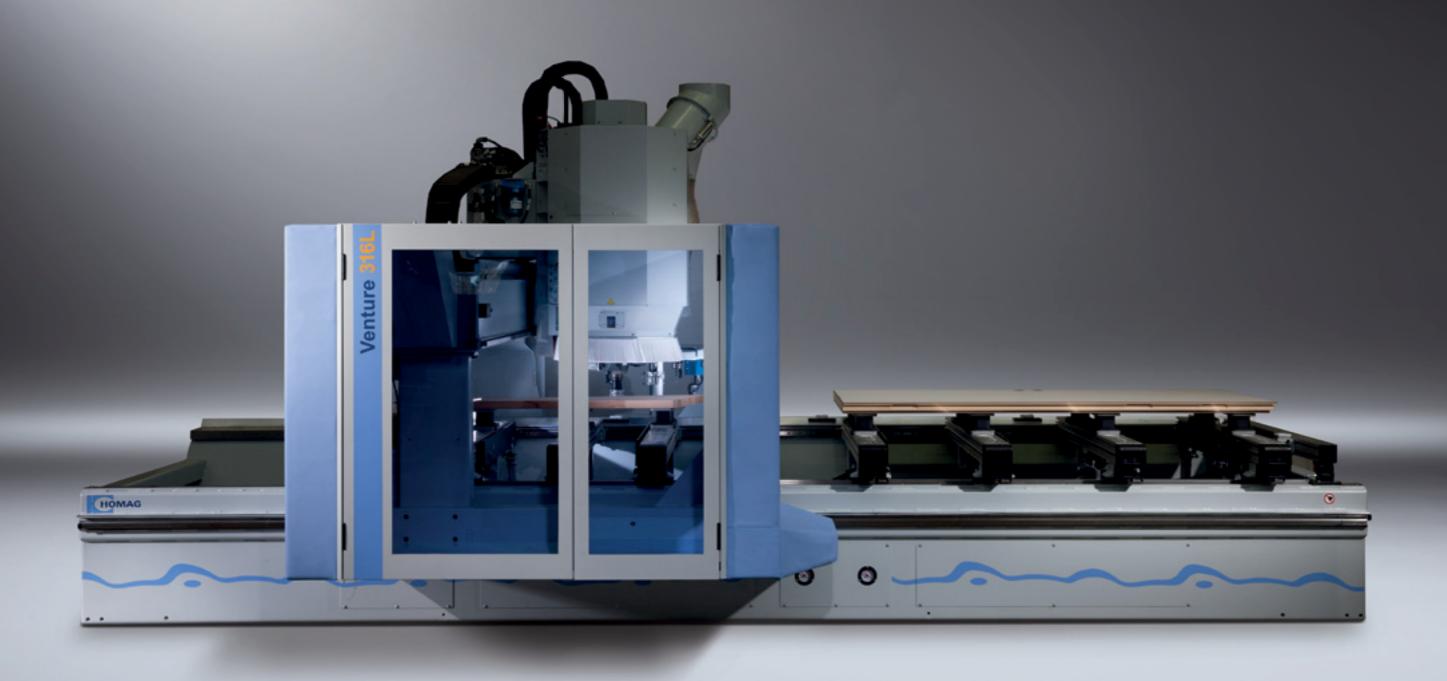


Precise mitre cutting - pinpoint accuracy first time



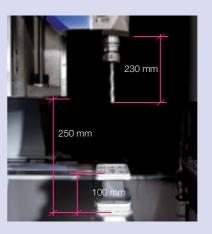
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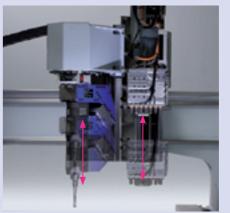


Quality and innovation down to the last detail

Innovative solutions for every woodworking assignment. Superior technology right from the start. Every customer can benefit from HOMAG's rich fund of system expertise. Our processing centres are the culmination of decades of experience in mechanical and plant engineering. Identical system components, standardized control engineering and ergonomic operation add up to increased productivity. State-of-the-art technologies for variable workpiece shapes at a high standard of quality.



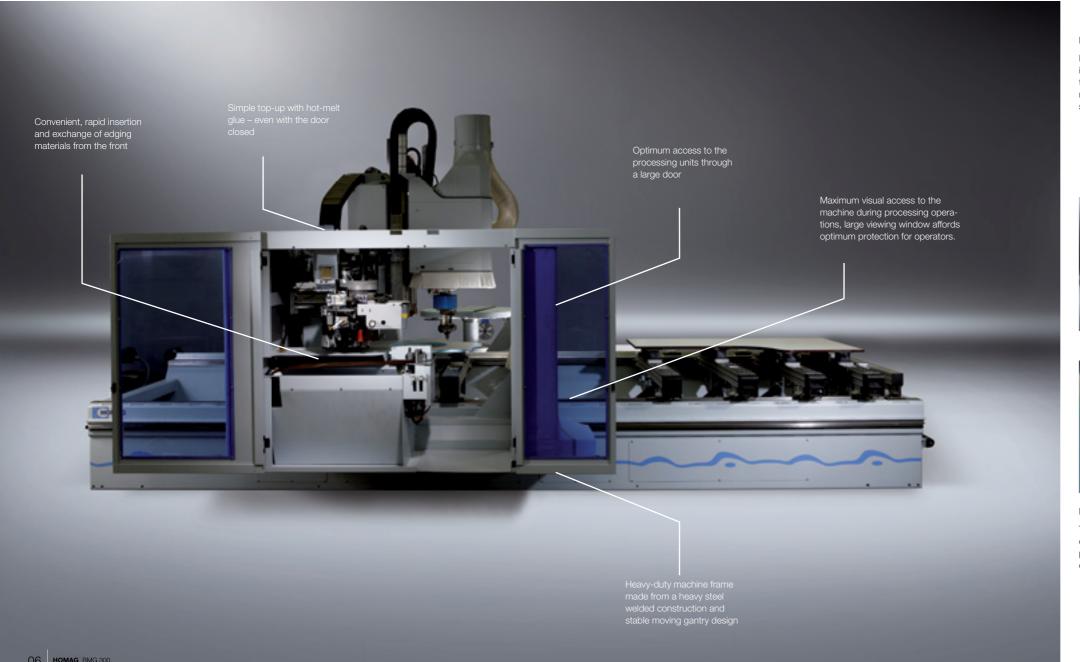
Processing height 250 mm from the upper edge of the console, also when using units or long tools.



Two separate Z axes for drilling head and routing spindle permit rapid alternating of drilling head and routing spindle application. A drive system moves only one unit over the entire axis length.



Covered linear guides with closed guide carriage and integrated central lubrication of all axes. Closed energy chains to protect against damage to cables and

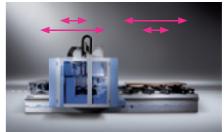


Dynamic alternating field size

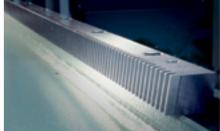
Bumper safety technology allows a dynamic alternating field size without fixed field allocation. This means that when processing longer parts on one side of the machine, it is still possible to prepare and position a shorter part on the other side.

Energy efficiency built in

Effective extraction with low connected load due to automatic closure of unused suction nozzles. Reduced power consumption due to standby operation of all powered components at the press of a button or automatically after a set time delay. Reduced compressed air consumption due to optimized pneumatic components.







Rack and pinion drive

The highly dynamic low-vibration rack and pinion drive systems in the X and Y direction ensure fast processing cycles and result in higher workpiece



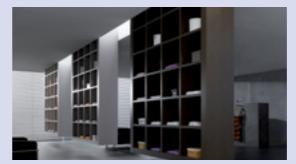
Protection against data loss

Uninterruptible power supply (UPS) to prevent data loss in case of power failure and mains voltage fluctuations.

As individual as your requirements

Deciding in favour of a HOMAG machine means investing in a highly efficient processing centre with the capability to fulfil wide-ranging different manufacturing requirements. Each machine is a complete system guaranteeing maximum output and efficiency every time - no matter how individual your production requirements are.

Drilling & trimming







360° edge gluing with the **power**Edge edge banding unit.

Gluing unit **easy**Edge for efficient banding

Perfect edge finish with traced combination

flush trimming / scraping unit

onto shaped components



High-speed drilling technology with grooving saw





Chamfer trimming on a table top



Square corner routing for a glass rebate





Mitre cut with high cutting depth for frames



Routing of a dovetail joint for upright / transom

Trimming of inclined grooves for panel connection



Processing arched components

Clamping and profiling frame components

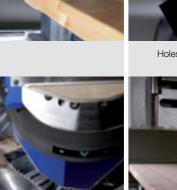
Precise-fitting corner dowel connections

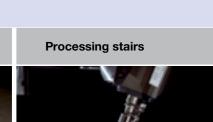


Step drilling for drill-in hinges

Processing doors

Lock case routing





Routing of a stair hand rail



Holes for paling at narrow angles



Precise, splinter-free miter cuts



Dividing cuts up to 110 mm in height

Trimming spindles

Our working spindle technology sets whole new standards, enhancing both the performance and flexibility of our machines. For instance the enormous benefit of a controlled working spindle with electronic speed monitoring. Other highlights include the vibration sensors for preventing damage to the trimming spindles, the sensoFlex tracing system and five-axis technology. Select your spindle to suit the needs of your present and future product spectrum.



Unit interfaces

The unit interfaces open up practically unlimited production scope. Using patented technologies, the assignment spectrum can be extended at any time.

Trimming spindle

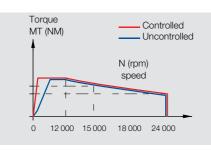
Working spindle with vector-controlled spindle speed 0–24 000 rpm for extreme torque even at low speeds, for example when sanding.

Electronic interface

Patented technologies such as the electronic interface offer scope for upgrading the application spectrum of your processing centre: This also includes the use of edge banding units. The control signals and necessary energy, for example to melt the glue, are transmitted to the unit.

2 3 4

- 1 AC motor with fluid cooling
- 2 Interpolating C axis
- 3 E interface
- 4 FLEX5(+) interface





Fluid cooling and spindle sensor

Fluid-cooled trimming spindles with hybrid bearings provide a long service life. An additional vibration sensor detects tool imbalance and protects the spindle from overloading, for example due to excessively high feed rates.





sensoFlex tracing system

- Perfect workpiece quality the traced spindle compensates any unevenness and unwanted tolerances
- Tracing facility for different tools ensures complete flexibility
- Functional upgrading through the facility to use wide-ranging different units

Five-axis trimming spindle

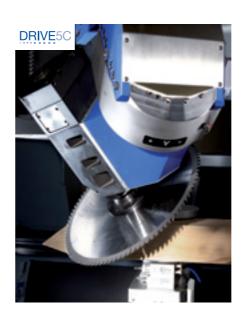
Compact DRIVE5C five-axis spindle with 10 kW output (optionally 12 kW) and a controlled spindle speed of 1,000 to 24,000 rpm for high torque even at low speeds.

Tool and unit interface

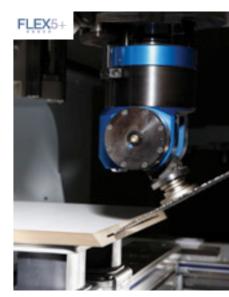
The patented pneumatic interface permits the use of traced units, for example for profiling furniture fronts.

Sawing, trimming, drilling at any angle

FLEX5+ Aggregat mit automatischer Winkeleinstellung und automatischem Werkzeugwechsel. Ein einzigartiges Aggregat für 4 Achs- Spindeln, welches über 90 % von Fünf-Achs-Applikationen abdeckt.







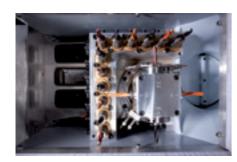
Drilling systems to the highest standard

High-speed drilling technology, patented clamping of the spindle and quick-change system for tools. Precise drilling, fast cycle speeds, maintenance-free and durable design.



Drilling head V12/H4

HIGH-SPEED drilling head up to 7 500 rpm with 12 vertical spindles, grooving saw and 4 horizontal spindles with 0/90° swivel facility. Fast drilling including grooving in the X/Y direction.





Drilling head V9/H4

HIGH-SPEED drilling head up to 7 500 rpm with 9 vertical spindles and 6 horizontal spindles.

Drilling head V17/H4

HIGH-SPEED drilling head up to 7 500 rpm with 17 vertical spindles, grooving saw and 4 horizontal spindles with 0/90° swivel facility. Fast drilling including grooving in the X/Y direction.





Drilling head V25/H10

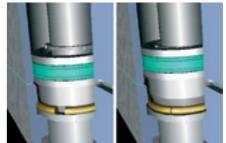
HIGH-SPEED drilling head up to 7 500 rpm with 25 vertical spindles, 6 horizontal spindles in the X direction and 4 in the Y direction including grooving in the X direction.



Quick-change system

Patented quick-change system for drill bit changeover without tools to reduce set-up times.





Drilling head with spindle locking mechanism

Automatic spindle locking mechanism: Patented system for precise drilling depth every time even with different materials. With speeds ranging from 1 500–7 500 rpm for high feed rates / short drilling cycles (appr. 1.5 sec.).

Drilling and trimming unit with 4 spindles

The 4-sided spindle outlet makes available four different drilling and trimming tools without tool change. Ideal for interior fittings and furniture construction involving different connecting and barrhware holes





Drilling head, 7 spindles in a 25 mm spacing pattern

Specifically for the office furniture sector, 7 holes can be drilled simultaneously at any angle. As an addition to the drilling head with popular 32 mm spacing pattern, a high degree of flexibility is achieved with minimal production times. On request, other distances and drill bit numbers are possible, for example for cup hinge hardware drilling in a single work process.

Tool changer systems

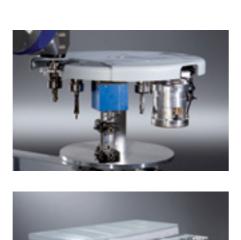
Simple flexibility. All neatly stored away for quick access. Tool changers provide the basis for the flexible deployment of tools and units, also for large saw blades or heavy processing tools.

18-slot plate changer

Increases the number of tools and units which can be directly accessed and reduces set-up times. Here too, a saw blade with a diameter of up to 350 mm can be accommodated.

14-slot plate changer

For tools and units with a diameter of up to 200 mm. A saw blade with a diameter of up to 350 mm can be accommodated in the changer.





Linear changer

Additional tool change magazine, with 8/9 slots and integrated tool transfer station, laterally mounted. The magazine also accommodates the pickup station for the optional **easy**Edge unit.

Units

Excellent processing quality and top marks in terms of speed. HOMAG Group processing units make available a range of innovative technologies. They can be combined and coordinated precisely to address your own specific application situation. Even special, non-standard assignments are reliably and efficiently processed.

Edge notching unit

For the production of right-angled, splinterfree, sharp-edged recesses, for example for efficient processing of door glazing cutouts, sink cutouts in kitchen worktops.

Underside trimming unit

For trimming and drilling the underneath of workpieces, e.g. recesses for kitchen worktop connectors or hardware holes in the edge area without the need to flip the workpiece. The maximum distance to the workpiece edge is 110 mm and the maximum tool projection is 30 mm.

Air jet nozzle

For cleaning the trimmed edges of dust and chips, ensuring optimum quality of the glue joint when edge banding.





Vertically traced trimming unit

By means of a tracing ring with dia. 70 mm / dia. 130 mm, or tracing pad, it is possible to perform operations such as pocket trimming in precise relation to the workpiece surface. When connecting kitchen worktops, tracing guarantees an offset-free transition by precise trimming of grooves for the tongue and groove joint

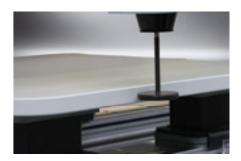




Lock case trimming unit with 2 toolholders

For trimming operation such as lock cases and lock face plates in doors, with integrated air jet for optimum chip discharge. The unit has a two-sided spindle outlet for two tools with a maximum useful length of 135 mm / 35 mm.





Measurement probe

Tracing system to determine the actual X, Y and Z axis measurement of relevance for processing with automatic correction offset in the processing program.

Innovative edge banding technology for all

HOMAG Group processing centers are ideally prepared for the use of ultra-modern edge banding technologies. The edge banding units are offered in a variety of performance categories and can be ideally coordinated to address your individual production requirements. Their patented electronic interface makes them easy to operate and ensures optimum control precision.



easyEdge and DRIVE5C+

The perfect combination of edge gluing and high-performance 5-axis processing. The DRIVE5C+ spindle engages the easyEdge unit directly from the pickup station in the lateral linear changer, the edging material is fed in – done.

powerEdge edge banding unit

The **power**Edge edge banding unit is the culmination of experience gathered from over 2,000 processing centres for edge banding and forms the basis for a complete family of edge banding units to cover a wide variety of applications.

easyEdge edge banding unit

The world's smallest edge banding machine – affordable, simple, efficient. The universal solution for edging small workpiece quantities with veneer edges, ABS edges, PP edges, melamine edges and thin PVC edges. In conjunction with a manual snipping unit, it is even possible to perform 360° butt joint edge banding in craftsmanship quality.

Combined snipping and corner rounding unit

Already edged rectangular workpieces are often finish processed on a processing centre, for instance to produce bevels or rounded contours. For finish processing, this patented unit provides, alongside traced cross-cutting of overhanging edges, also precise corner rounding of edges up to a thickness of 3 mm at a 90° workpiece corner.

Combined flush trimming - scraper blade unit

Combination unit for flush trimming the edge overhang and for scraper blade finishing. This removes cutter marks and other unevenness on the edge profile. Three-sided unit tracing compensates for workpiece and edge tolerances and guarantees a high standard of processing quality. The unit is available for workpiece thicknesses of 60 mm and 100 mm.

Flush trimming unit with separating agent

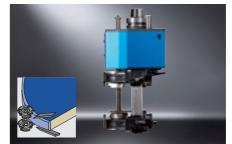
Separating agent application during flush trimming reduces the amount of glue residues on the workpiece and often eliminates the need for scraping the glue joint with a glue joint scraper blade unit (depending on the glue and edging type and on the quality expectations). (Two versions are available for workpiece thicknesses 60 mm and 100 mm.)



Using the electronic interface, additional energy is transmitted for heating, as well as control signals for high-precision, automatic butt joint edge banding. The interface offers the unique flexibility needed to use even different edge banding units on a single processing centre, or to use the processing centre for other tasks during maintenance of the edge banding unit.



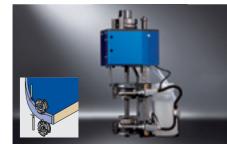


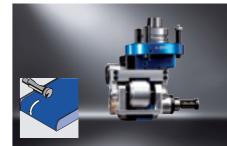




Sawing and snipping unit

The position of the saw blade in the centre of the C axis permits special high-precision snipping cuts to be performed during edge banding. All other sawing operations can naturally be performed up to a cutting depth of 65 mm.





Horizontally traced trimming unit

By means of a tracing roller, horizontal trimming operations are performed precisely relative to the workpiece surface, e.g. during flush trimming of overhanging edges on the postforming profiles of a kitchen worktop. The diameter of the tracing roller and trimming tool are coordinated, generally to 20 mm.

Fast, neat and convenient – the console table

The classic with the dual-circuit vacuum system. The vacuum clamps are steplessly positioned and offer clearance for the use of tools and for dropping waste pieces. The fast, precise and primarily simple positioning of suction cups is facilitated by the LED or laser positioning aid. Wooden staves, moldings, arch components, narrow or frame components – HOMAG clamping systems will ensure reliable fixture of even the most unusual workpieces.



Suction cups are displayed using a laser beam (cross hairs). The workpiece contour can be "travelled" as a positioning aid for freeform parts.



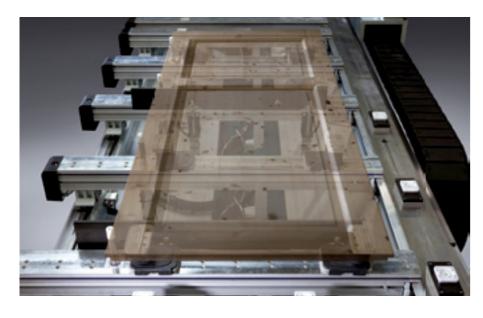
LED system – both the fastest and safest positioning system for consoles and clamping elements (patented).



Laser projection of the clamps and the workpiece contour for optimum utilization and simple positioning of raw parts which cannot be aligned at the stops.

Linear guide and insertion aid

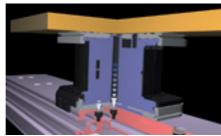
Simple handling by consoles with high-precision linear guides and durable insertion aids with two pneumatic cylinders. Vacuum and compressed air connections are integrated in the consoles for pneumatic clamps and clamping templates.



Bolts with end position scanning and for laminate overhang

Stop bolts with end position monitoring to protect tools, units and machine operating staff. Exchangeable stops specifically for workpieces with laminate overhang.





Dual circuit vacuum system

Exclusive vacuum clamping technology with patented double sealing lip for the stepless displacement of clamps along the console. The first clamping circuit fixes the clamps in the console and prevents unwanted displacement. The second then holds the material firmly in position.

powerClam

Manual clamping fixture powerClamp for straight and curved parts. Ideal for all arched, narrow and frame parts.

Clamping device

Uprights and staves can be securely clamped in no time using this clamping device.

3-step clamp

Highly rigid 3-step clamps with extreme clamping height for precise complete processing of window and front door components without subsequent outside moulding and profiling.

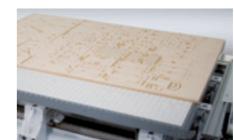




Multiclamp for dual circuit vacuum system

Vacuum actuated clamping element for clamping strips and staves.





Matrix adapter plate

Highly flexible clamping systems offer secure fixture even when working with filigree workpieces. The matrix adapter panel even permits shaped components to be "cut to size" with optimized cutting waste on a console table machine using the nesting process.





Vacuum clamps made of aluminum

Vacuum clamp in aluminium with additional mechanical clamping operation at the console for engaging solid wood parts. The suction plate can be rotated and also exchanged, and is lined with emery cloth.

Saves time and enhances flexibility: the automatic positioning AP table

AP – automatic positioning – provides the key to greater convenience, faster set-up and optimized processing steps. The automatic positioning of clamps permits operations such as moving workpieces apart after a separating cut.



Versatile application: the matrix table

The grooved aluminium matrix table permits the positive locking of clamping elements and consequently reliable workpiece fixture even where high hogging forces are involved. The transmission of vacuum through the table construction optimizes distribution of the vacuum, reduces leaks and transmission losses and does away with the need for complex installations. Using different clamps with variable clamping heights, the matrix table is also suitable for the use of units.



movePart

The clamps move apart automatically in the program sequence after separation for complete processing.



powerClamp clamping fixture for straight and curved parts. Ideal for all arched, narrow and frame parts. Also with automatic reclamping for 5-sided processing.



Freely equippable system base plate for vacuum clamp.

Maxi-Flex for grid tables

System base plate, can be freely equipped with vacuum clamps with a magnet base plate

Fixture using non-standard clamps

The aluminium grid table with dovetail guides guarantees precise, positive fitting clamping element fixture.

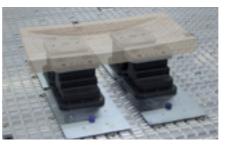


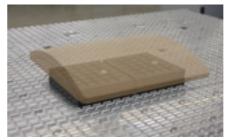




Clamping device

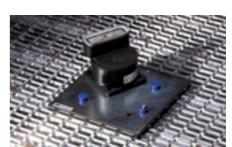
Uprights and staves can be securely clamped in no time using this clamping device.

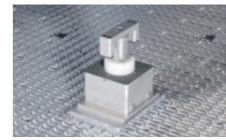




Vacuum clamp

Vacuum clamping elements for insertion in the grooves of the grid table.





Multiclamp

Vacuum actuated clamping element for clamping strips and stayes.





Vacuum grid table with air cushion function

The vacuum transmission is integrated in the design of the aluminium grid table. Division into zones and efficient vacuum pumps ensure reliable clamping, even for nesting processes with underlay panels. The air cushion function makes light work of handling large-format panel-shaped workpieces.

HOMAG software:

The basis for simple, efficient operation

Our processing centres are one thing - the software needed for their convenient, simple operation day in, day out is another. This is why HOMAG software guarantees extreme flexibility and operating reliability. A matter of course at HOMAG: interfaces to external programming and design systems, help programs for interleaving and modules to help you monitor your machine and track its performance.

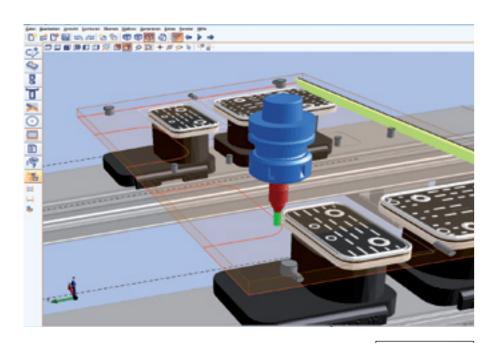
powerTouch is the latest operating philosophy of the HOMAG Group. It combines design and function to create a completely new control generation. The new system is characterized by the full HD multitouch monitor, ergonomic touch operation, simple navigation and the standardized user interface.

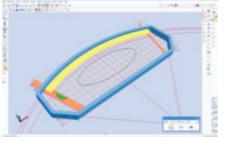


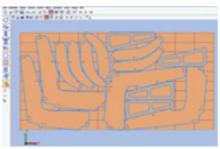
- · Fast, intuitive operation based on simple, direct navigation
- Optional use of variables for flexible variant programming
- · Fast creation of your own subroutines
- More programming reliability with 3D graphics of the workpiece, processing
- High degree of operating convenience due to freely configurable windows, multiscreen capability, language-neutral input screens, help graphics and much
- · Biggest forum for CNC programming in the Internet: www.woodWOP-Forum.de

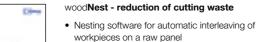
woodWOP CAD-Plugin

- CAD functions integrated directly in woodWOP
- · CAD drawings can be generated directly at the machine and at the production engineering
- Import of CAD drawings in DXF format
- · Intuitive operation and fast familiarization with a standardized user interface









- Material cost savings due to optimum utilization of
- Individually adjustable optimization parameters help reduce overall processing time and take care of
- process reliability

woodWOP Wizard - your automatic route to the perfect edge

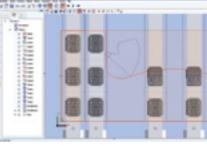
- · Automatic generation of the complete processing sequence for edging
- · Generation of all processing steps such as rough trimming, jointing trimming, edging, snipping, flush trimming and scraping
- Takes into consideration workpiece geometry, edge transitions and edge type
- Time savings of over 90 % compared to conventional programming

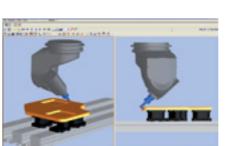
woodScout - help in your own language

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

collisionControl - permanent safety for your

- Monitors possible collisions between machine components and clamps during processing
- Automatic machine stop in the event of an
- impending crash situation • Display of the crash situation in the form of a
- snapshot with collision bodies shown up in colour
- Depiction of the machine as a moving 3D model in live operation













woodMotion - processing program simulation

- · Graphic simulation of the CNC program at the
- Reduction of machine running-in time due to optimum program preparation
- Simulation of 5-axis processing including material
- · Display of real processing time
- · Collision monitoring between the tool and clamping elements

Machine data acquisition MMR - 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

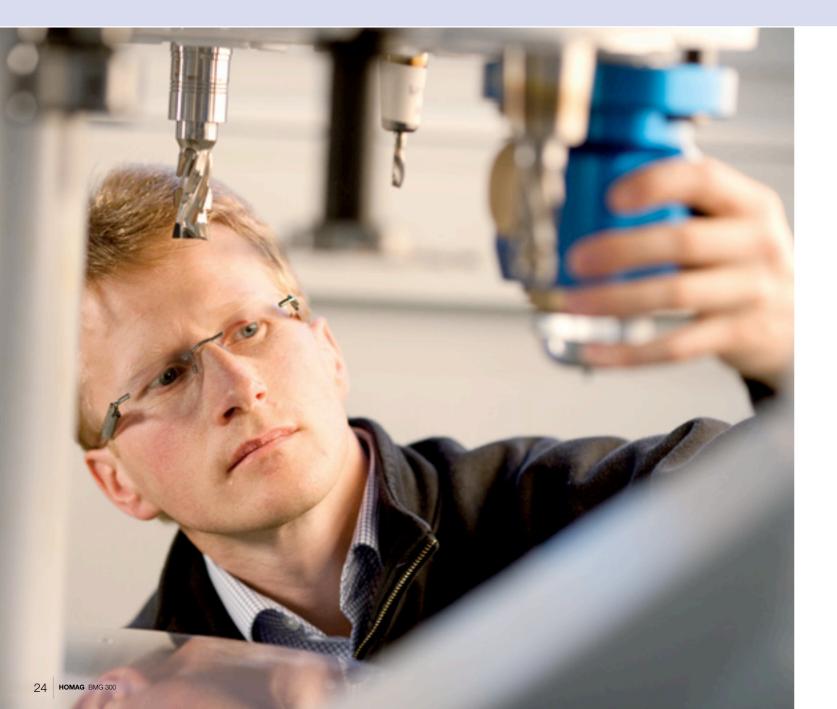
- Dimensioned graphics for simple set-up and management of tools and units
- Spatial depiction of tools



The complete range of services



The sale of our machines comes with all-in optimum service backup and individual advice. We place the entire wealth of our extensive expertise at your service, both at the procurement stage and during running operation. The HOMAG Group lifeline | service ensures optimum availability and economical production - over the entire life cycle of your machine.





- Intelligent stand-by operation reduces energy costs during break times or in case of partial capacity utilization by up to 10 %, saving up to 8 000 kwh of power per year
- A flap control system switches the volumetric flow of the extraction system to the processing units actually in use. This cuts up to 20 % of the costs for extraction, corresponding to a saving of up to 12 000 kWh per year



Value stability and long machine service life

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

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 degree of availability through preventive maintenance and worldwide service

- Worldwide service with over 500 technicians
- 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
- TeleServiceNet our "eye" into the machine avoids costly on-side services
- wood**Scout** diagnostic software intelligent self-help for all machine operators





For details of other applications, please apply for our **eco**Plus brochure.



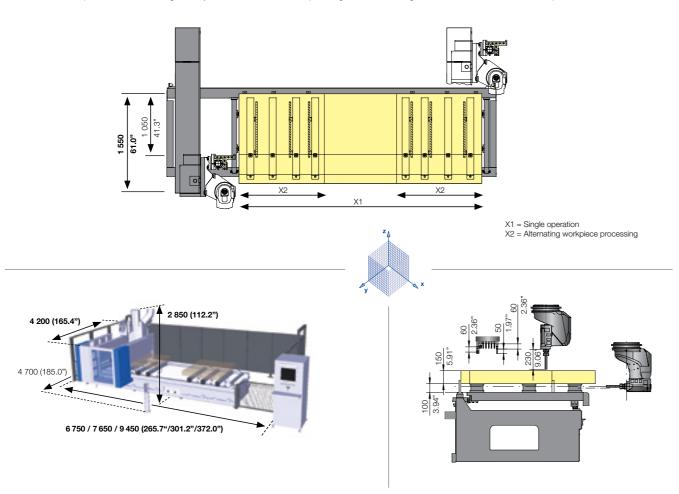
For other applications, please apply for our unit and clamping element catalogue.

Technical data BMG 300

Machines with 5-axis spindle												
Model	X = Workpiece length [mm]				Y = 1	Workpiece thickness [mm]						
	All units		With tool diameter 25 mm		A = 0° with tool diameter 25 mm	A = 90° with tool length 230 mm	A = 0° all units A = 90° with tool length 230 mm	With tool length 230 mm				
	Individual processing (X1)	Alternating processing* (X2)	Individual processing	Alternating processing*	Rear stop	Rear stop	Front stop	From console				
BMG311/33	3 300 129.9"	1 020 40.2"	3 475 136.8"	1 200 47.2"	1 550 61.0"	1 400** 55.1"	1 050** 41.3"	250 9.8"				
BMG311/42	4 200 165.4"	1 470 57.9"	4 375 172.2"	1 650 65.0"	1 550 61.0"	1 400** 55.1"	1 050** 41.3"	250 9.8"				
BMG311/60	6 000 236.2"	2 370 93.3"	6 175 243.1"	2 550 100.4"	1 550 61.0"	1 400** 55.1"	1 050** 41.3"	250 9.8"				

^{*} Dimension with central division. Size of alternating field dynamically adapted to component size.

Technical data and photos are not binding in every detail. We reserve the express right to make changes in the interests of further development.

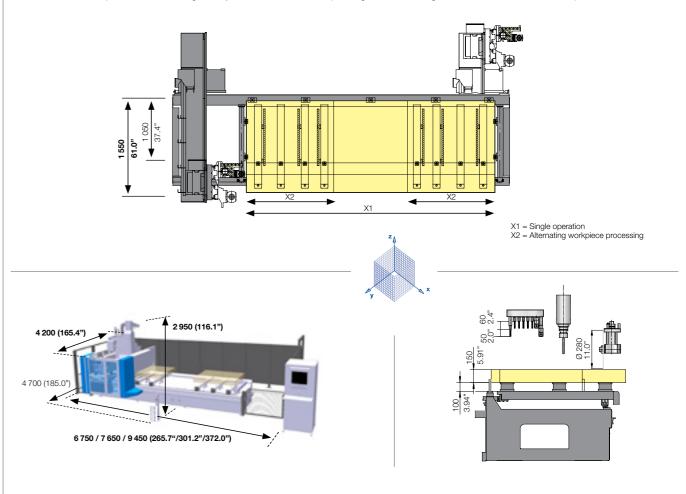


Model	X = Workpiece length [mm]					Workpiece thick- ness [mm]			
	All	units	With tool diameter 25 mm		With tool diameter 25 mm	All units in main spindle		Gluing	
	Individual processing (X1)	Alternating processing* (X2)	Individual processing	Alternating processing*	Rear stop	Rear stop	Front stop	Rear stop	From console
3MG311/33	3 300	1 020	3 475	1 200	1 550	1 400	1 050	1 500	250
	129.9"	40.2"	136.8"	47.2"	61.0"	55.1"	37.4"	59.1"	9.8"
BMG311/42	4 200	1 470	4 375	1 650	1 550	1 400	1 050	1 500	250
	165.4"	57.9"	172.2"	65.0"	61.0"	55.1"	37.4"	59.1"	9.8"
BMG311/60	6 000	2 370	6 175	2 550	1 550	1 400	1 050	1 500	250
	236.2"	93.3"	243.1"	100.4"	61.0"	55.1"	37.4"	59.1"	9.8"

^{*} Dimension with central division. Large alternating field dynamically adapted to component size.

The drilling head work area is dependent on the configuration.

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^{**} Overall length of tool for rear processing operations max. 150 mm.

^{*} Depending on the machine configuration