

Processing center

Venture 313



HOMAG: Productivity from the word go

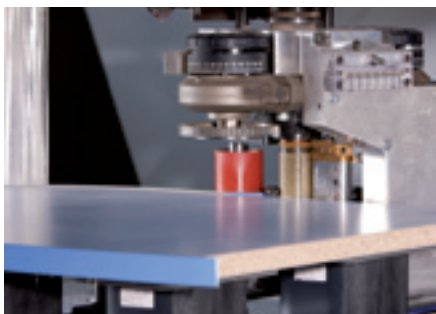
As an experienced machine and plant manufacturer we are well aware that investment in any new machine must generate value for money. Particularly in the long term. This is why you may expect more from HOMAG: Individually equipped machines complete with ultramodern technology for highly efficient production. Our perfectly tuned international servicing and maintenance package provides the assurance you need of maximum availability over the entire life cycle of your plant. Which means additional investment security for you.

- HOMAG – High technology for industrial producers and woodworking shops
- Over 50 years of experience in machine and plant engineering
- 12 locations around the world with a workforce totaling over 5000
- Production of over 1500 processing centers a year throughout the HOMAG Group
- A reliable partner backed by an international servicing network
- Superior technology and high-performance features well in excess of the industry standard

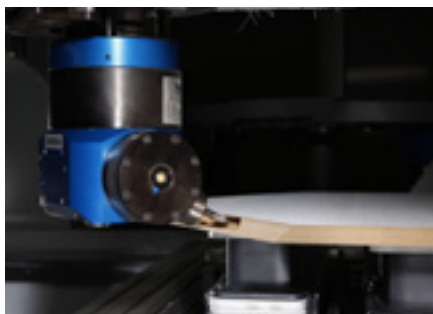
High technology for woodworking shops and industrial producers:

- Featuring a high-performance 4-axis trimming spindle with interpolating C axis and **easyEdge** option, the Venture 313 offers maximum flexibility and a whole wealth of possibilities
- A heavy-duty basic machine frame and a stable moving gantry form the optimum basis for a high standard of processing quality.





Edge banding with the **easyEdge** unit



Free angle processing with the **FLEX5+** unit



Lock case trimming on front doors



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Quality and innovation down to the last detail

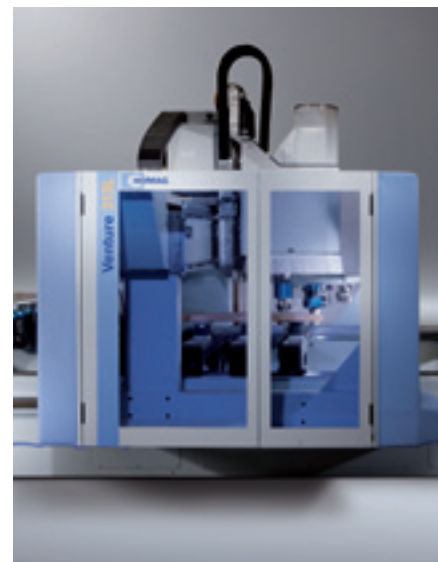
Innovative solutions no matter what the assignment. Superior technology right from day one. Every customer benefits from HOMAG's outstanding system competence. Our processing centers are the culmination of decades of experience in the field of mechanical and plant engineering. Identical system components, standardized control engineering and ergonomic operation provide the assurance of improved productivity. The latest technologies for variable workpiece shapes to the highest standard of quality.

Heavy-duty machine frame and stable mobile gantry construction

The machine frame is made from a heavy-duty welded steel construction based on decades of experience gathered in the world of industrial plant engineering. Positioned on the frame is the stable moving gantry crossbar fitted with trimming spindle, drilling head and coupled-motion tool changer – the perfect basis for premium processing quality.

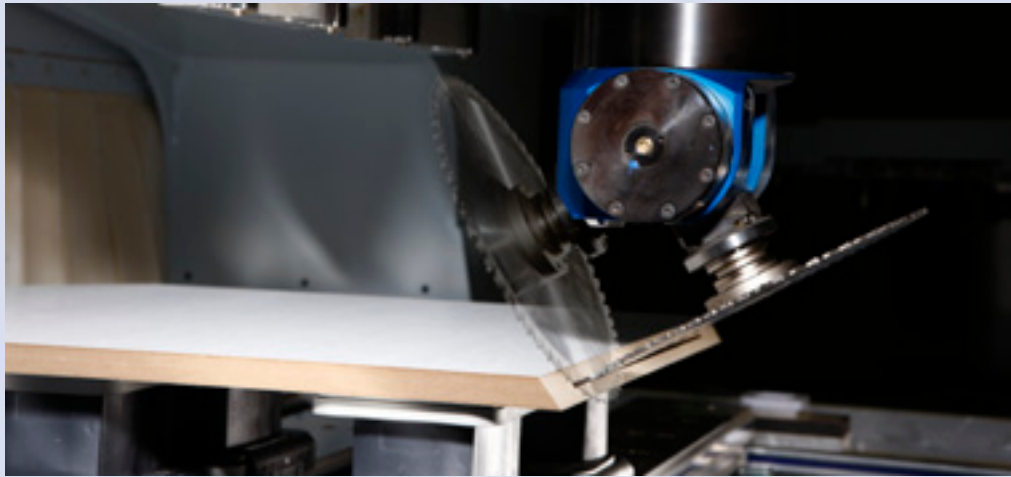
Clear visual access during processing

The coupled-motion partial encapsulation offers optimum protection for the operator and at the same time affords a clear view of the action during processing.



Optimum access to the processing units

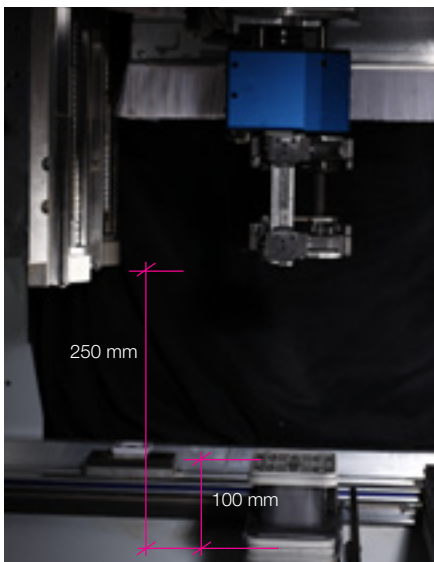
The entire machine front can be made accessible by opening a large door, affording easy access to all the processing units for maintenance work.



Patented technologies extend the assignment spectrum and turn HOMAG processing centers into multitasking machines.

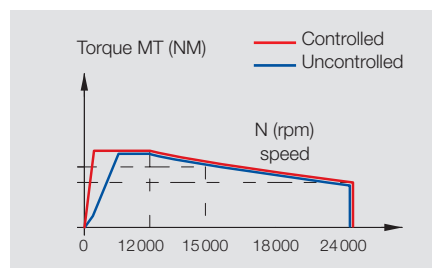
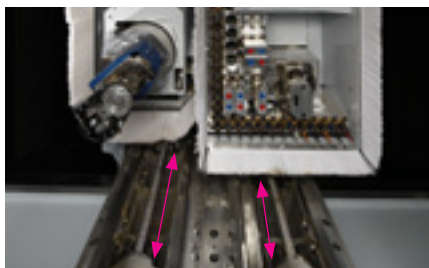
Extreme workpiece thicknesses

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



Two Z axes

Two separate Z axes for drilling head and working spindle permit rapid alternating drilling head and working spindle application. A drive system moves only one unit over the entire axis length. This avoids disturbing contours and lends the machine added rigidity and speed.

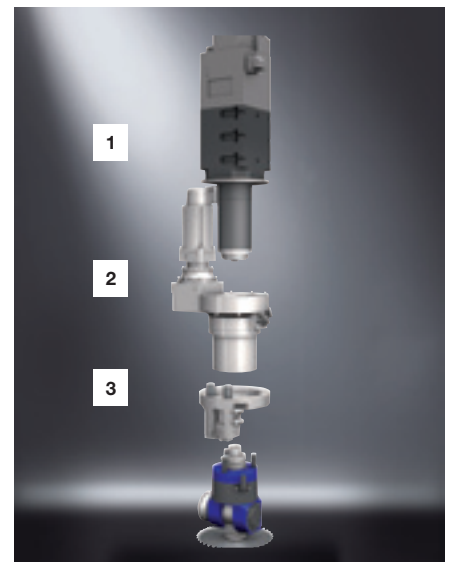


Trimming spindle

Working spindle with controlled spindle speed 1 500–24 000 rpm for extreme torque even at low speeds, for example when sanding.

Unit interfaces

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



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



Flexibility for furniture and interior fittings

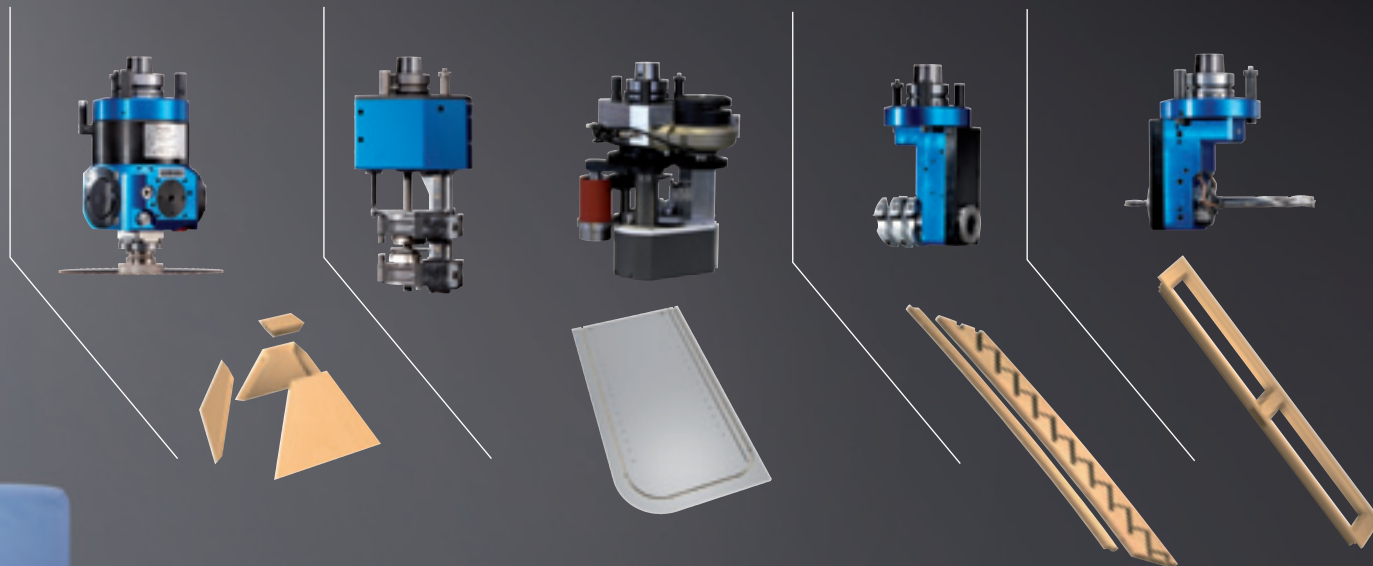
FLEX5+ sawing, trimming and drilling unit with automatic angle setting and automatic tool change

Flush trimming unit

easyEdge edge banding unit

Horizontal trimming unit

Lock case trimming unit



As individual as your requirements

Choose from three equipment packages for your Venture 313:

The basic package






Low-cost entry into gluing technology and FLEX5 processing with full functionality.

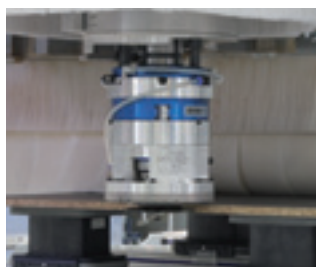
The future package

Fast, reliable set-up of clamps with LED and high drilling output for panel processing with a larger drilling head.

The performance package

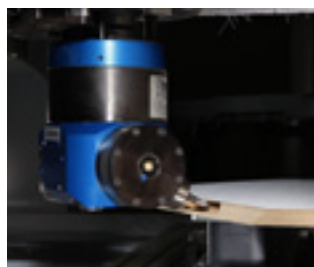
Fast, reliable set-up with LED, higher output due to extra-large drilling head and additional tool changing slots.

Equipment variants	Drilling heads			Interface	
	<p>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.</p>	<p>HIGH-SPEED drilling head up to 7 500 rpm with 17 vertical spindles, grooving saw and 4 horizontal spindles with 0/90° swivel facility. Fewer drilling cycles including grooving in the X/Y direction.</p>	<p>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.</p>	<p>The integrated interface allows the FLEX5 or FLEX5+ unit to be retrofitted at any time. For precise processing operations at "any" angle without manual settings.</p>	
					
Basic	■			■	
Future	■			■	
Performance	■			■	



Precise-fitting connecting grooves

Traced trimming of connecting grooves for precise-fitting connection of panels, even with thickness tolerances or unevenness. Constant, pneumatically controlled contact pressure and integrated workpiece cleaning nozzles.



Sawing, trimming, drilling at any angle

FLEX5+ unit with automatic angle adjustment and automatic tool change. A unique feature which covers more than 90 % of five-axis applications.



The **easyEdge** edge banding unit turns the Venture 313 into an edge banding machine.

Set-up aid

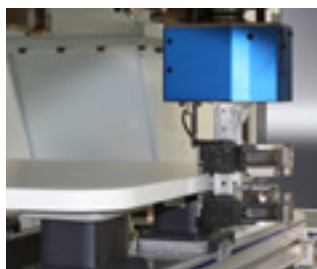
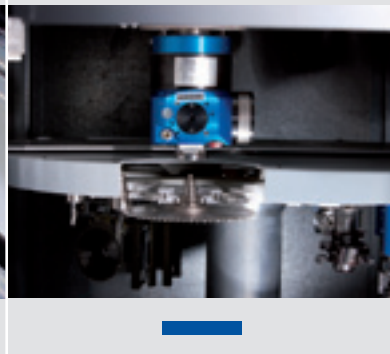
Suction cups are displayed using a laser beam (cross hairs). The workpiece contour can be "traveled" as a positioning aid for freeform parts.

LED displays for fast, simple positioning of vacuum clamps and consoles. Up to 70 % time savings during set-up, with correct positioning monitored "at a glance".

Tool changer

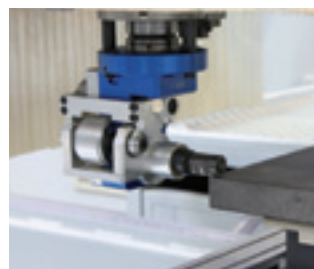
14-slot plate changer for tools and units with a diameter of up to 200 mm. The lower arrangement of the changer permits tool change with the FLEX5+ (optional).

18-slot plate changer increases the number of tools and units which can be directly accessed and reduces set-up times. Here too, tool change is possible with the FLEX5+ (option).



Perfect edge finish

Perfect edge finish due to traced combination flush trimming / scraping unit – efficient processing without tool change.



Flush trimming

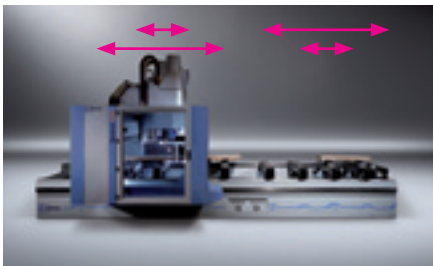
Traced flush trimming of edge overhang on postforming profiles.

High-end features – all inclusive

The Venture 313 offers a range of impressive features even in its basic equipment version. Here, identical components were used from the high-performance series which far exceed the customary standard in the industry. Your benefits: Outstanding machine availability for your production. The widespread use of “identical parts” within the HOMAG Group reduces the costs of spare parts and speeds up their delivery.

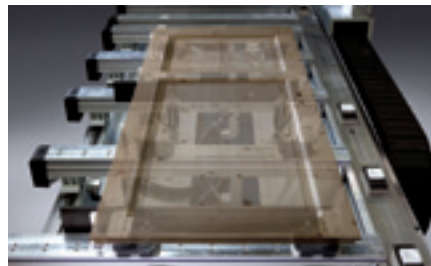
Dynamic alternating field size

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.



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.



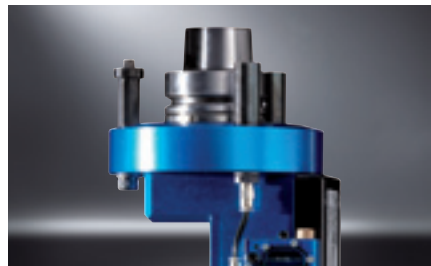
Quick-change system

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



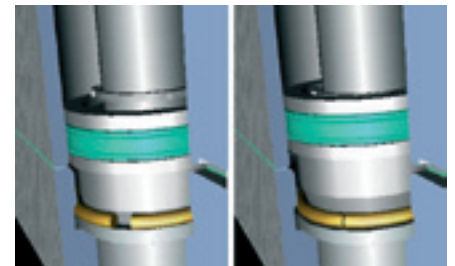
Fluid cooling and spindle sensor

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



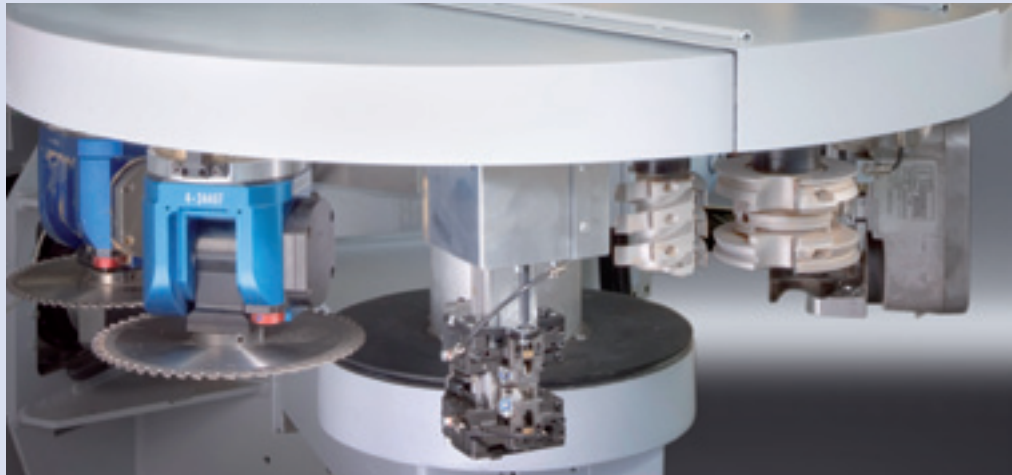
3-point support

The retainer for the three bolts of the highly rigid 3-point support also permits transmission of compressed air into the units.



Drilling head with spindle locking mechanism

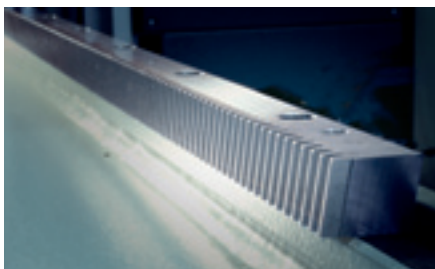
Automatic spindle locking mechanism: Patented system for precise drilling depth every time even with different materials. With speeds ranging from 1 500–7 500 rpm for high feed rates / short drilling cycles (appr. 1.5 sec).



Tool changers provide the basis for the flexible deployment of tools and units, also with large diameters of up to 200 mm.

Bolts with end position scanning and for coating ply overhang

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



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 quality.

Closed energy chains

Closed energy chains prevent damage to cables and hoses. This reduces the incidence of faults and possible repair costs.

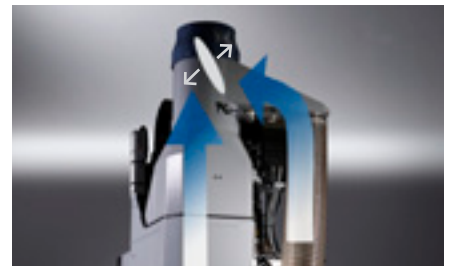


Covered linear guides and automatic central lubrication processes

Covered linear guides with closed guide carriage and integrated central lubrication of all axes guarantee low-maintenance, reliable operation.

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.

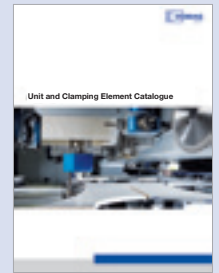


Protection against data loss

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

We have already planned for whatever the future may bring

A HOMAG processing center is a decision for the future. You will go on profiting in the long term. Because your Venture grows flexibly step by step with your requirements. The use of additional units and clamps permits selective extension of the processing scope. At any time. The sound backing of competence behind the HOMAG Group and our worldwide servicing network are your assurance of an investment which pays dividends.



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

easyEdge gluing package

easyEdge gluing unit for efficient edge banding on shaped components. Ideal as a package solution in conjunction with the combination flush trimming and scraping unit.

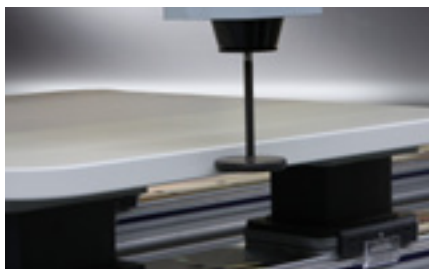


Air jet nozzle at the unit carrier

A pneumatically controllable air jet nozzle takes care of efficient workpiece edge cleaning. This guarantees an optimum standard of glued joint quality when edge banding without the need for set-up times.

Linear changer

Additional tool change magazine, with 8 slots and integrated tool transfer station, laterally mounted. The magazine also accommodates the pickup station for the optional easyEdge unit.

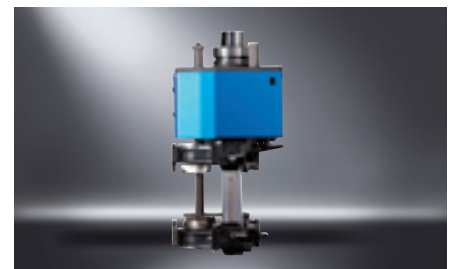
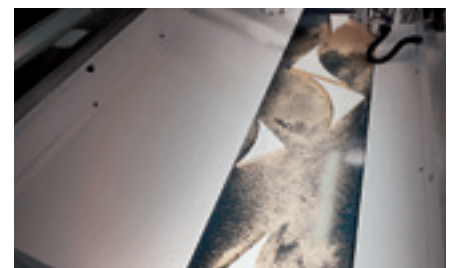


Measurement probe

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

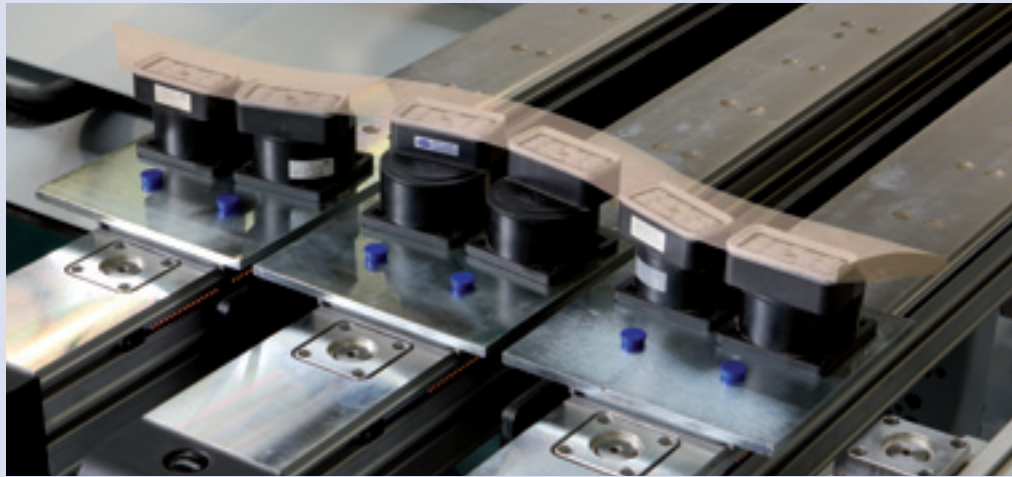
Chip conveyor belt

Highly rigid machine bed with integrated waste piece catchment over the entire processing depth. No waste pieces drop in front of the machine (optionally with chip conveyor belt).



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.



A wide choice of different clamping elements allows workpieces to be clamped with absolute speed, precision and flexibility without the need for nonstandard fixtures.

powerClamp

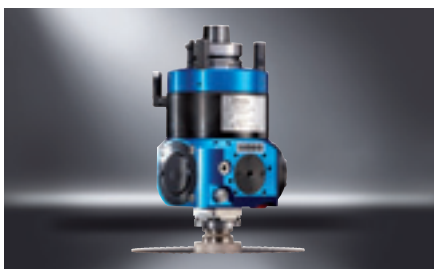
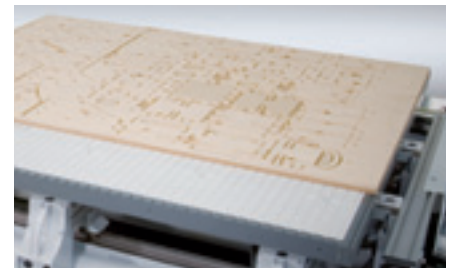
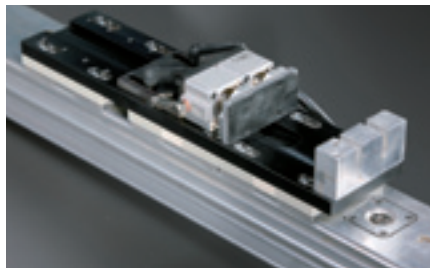
Manual clamping fixture **powerClamp** for straight and curved parts. Ideal for all arched, narrow and frame parts.

Clamping device

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

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.



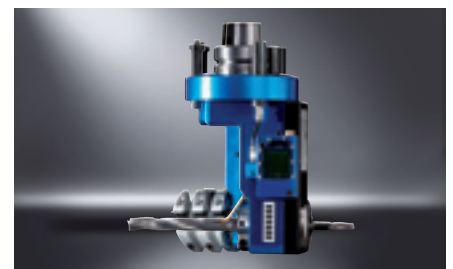
FLEX5+ sawing, trimming and drilling unit with automatic angle adjustment

As well as automatic angle setting, the FLEX5+ also offers automatic tool change. As a result, complete processing of a wide selection of workpieces is possible, e.g. pyramids, without manual intervention. Both cutting, grooving and dowel hole drilling are performed to a high standard of precision. Depending on angle adjustment of the A axis, cutting depths of up to 60 mm are possible, as well as boreholes with a useful tool length of 60 mm. (FLEX5 without automatic tool change for the basic equipment outfit.)



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 hardware holes. Highly rigid monoblock design and crown wheel gearing (Cylkro gear) permit light-duty trimming operations to be performed. The maximum useful length of tools is 50 mm / 55 mm.



Lock case trimming unit with 2 toolholders

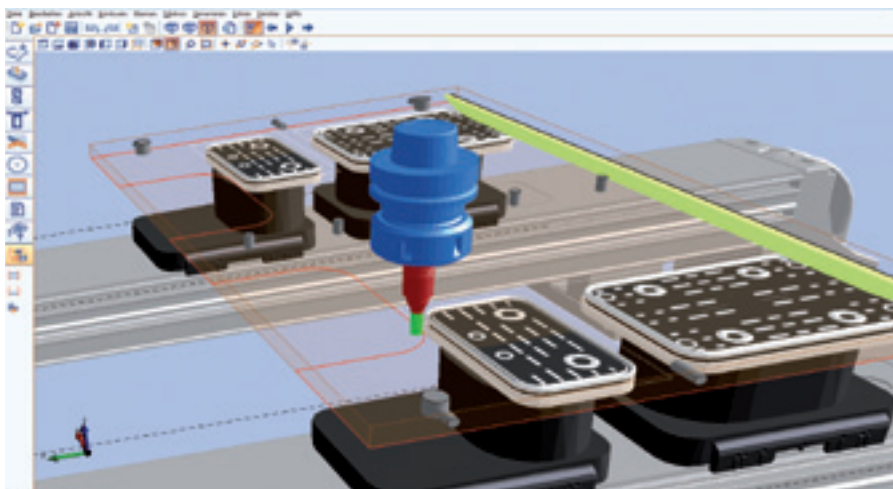
For trimming operation such as lock cases and lock face plates in doors, with integrated air jet for optimum chip discharge. The unit has a spindle outlet on two sides for two tools to ensure efficient processing without additional changeover. Also available in a high-performance version for heavy-duty trimming operations with high feed rates.

Software and servicing

Our modern software solutions and comprehensive range of HOMAG services help to maximize the full potential of your processing center. The machine-specific software is modular in structure and permits fast, simple integration into your production environment. Custom-tailored service and maintenance packages across the entire life cycle of your plant ensure maximum availability and offer additional investment security.

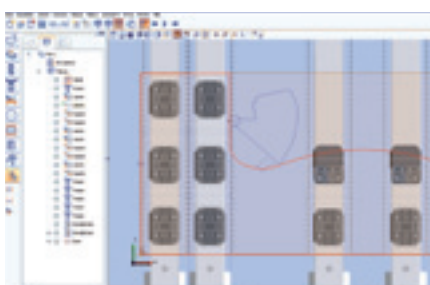


For additional modules and more information, refer to our "Software for processing centers" brochure.



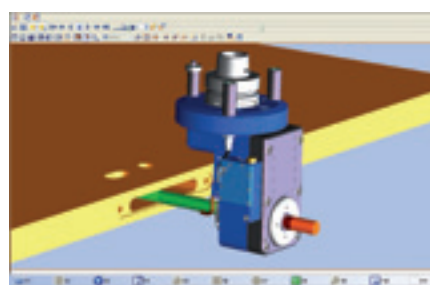
woodWOP – streamlined operations through fast programming

- 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 operations and clamps
- High degree of operating convenience due to freely configurable windows, multiscreen capability, language-neutral input screens, help graphics and much more.
- Biggest forum for CNC programming in the Internet: www.woodWOP-Forum.de



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, sizing, 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



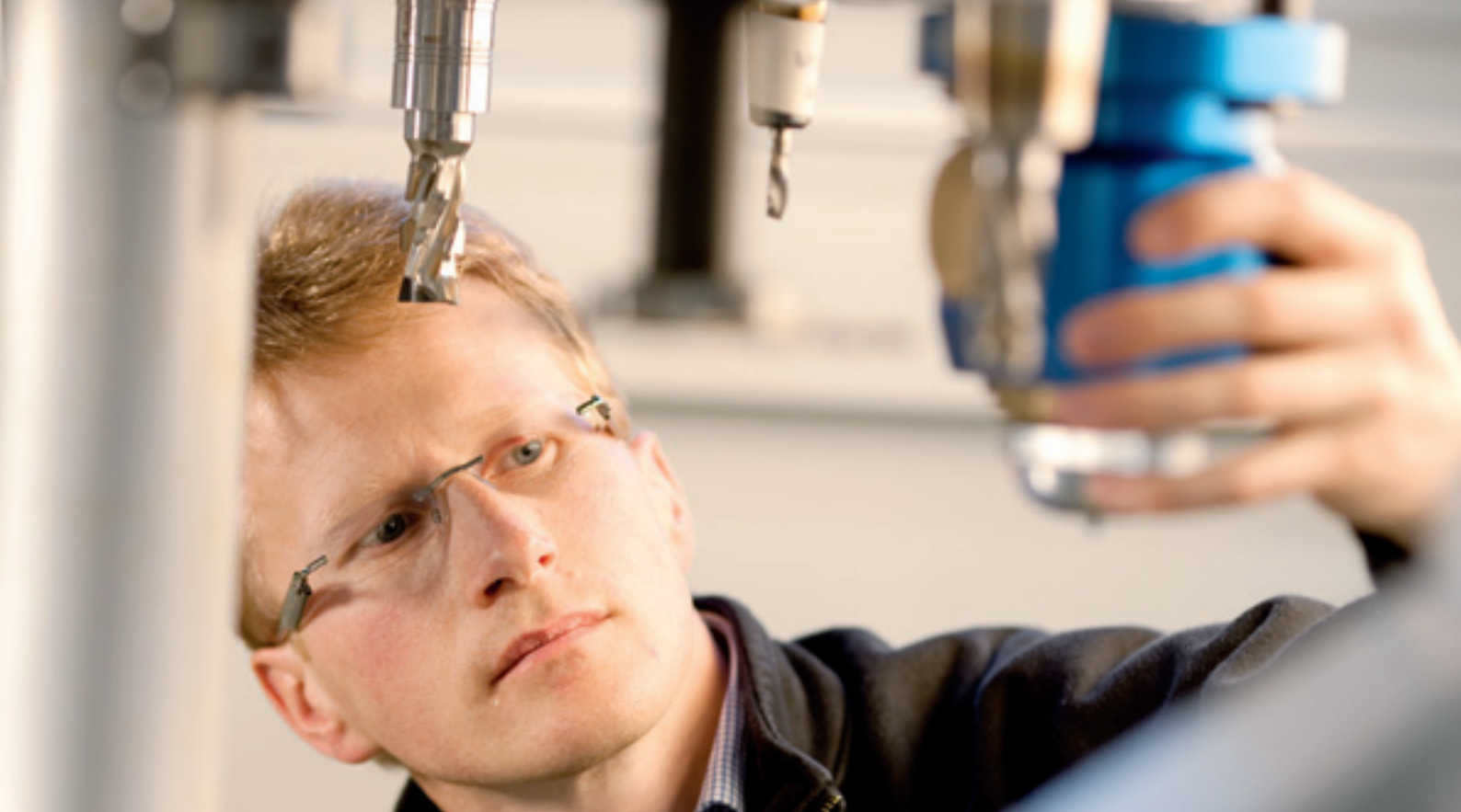
woodMotion – processing program simulation

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



collisionControl – permanent safety for your machine

- Monitors possible collisions between machine components and clamps during processing
- Automatic machine stop in the event of an impending crash situation
- Snapshot display of crash situation
- Live depiction as a moving 3D model



Low energy costs

- Intelligent standby operation reduces energy costs during break times or in case of partial capacity utilization by up to 10 %, saving up to 8000 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 12000 kWh per annum



Optimum financing

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

Value stability and long machine service life

- Facility for continuous upgrading of processing center 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

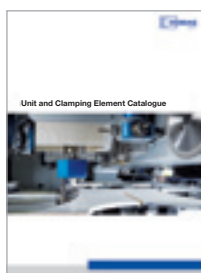


High degree of availability through preventive maintenance and worldwide service

- 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 eliminates the need for costly service callouts
- woodScout diagnostic software – intelligent self-help for all machine operators



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



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

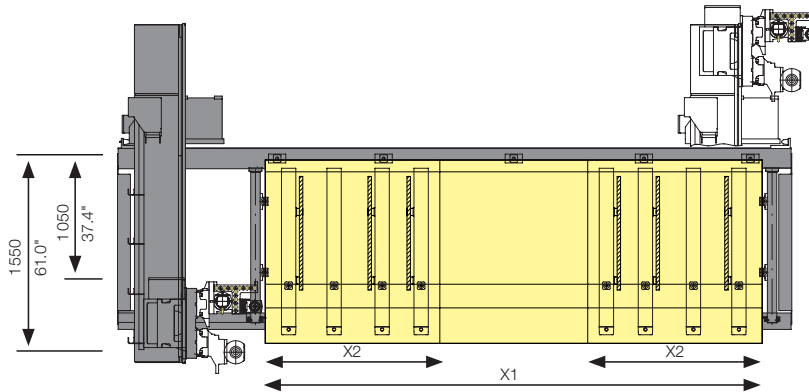
Technical data

Model	X = Workpiece length [mm]				Y = Workpiece width [mm]			Workpiece thickness [mm]
	All units		With tool diameter 25 mm		With tool diameter 25 mm	All units in main spindle		
	Individual processing (X1)	Alternating processing* (X2)	Individual processing	Alternating processing*	Rear stop	Rear stop	Front stop	From console
Venture 313M	3300 129.9"	1025 40.4"	3475 136.8"	1200 47.2"	1550 61.0"	1400 55.1"	1050 37.4"	250 9.8"
Venture 313L	4200 165.4"	1475 58.1"	4375 172.2"	1650 65.0"	1550 61.0"	1400 55.1"	1050 37.4"	250 9.8"
Venture 313XXL	6000 236.2"	2375 93.5"	6175 243.1"	2550 100.4"	1550 61.0"	1400 55.1"	1050 37.4"	250 9.8"

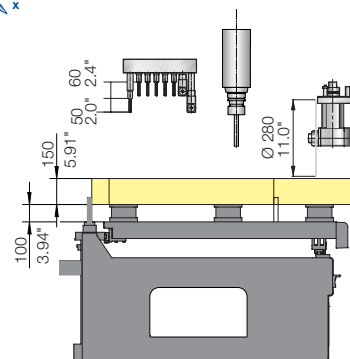
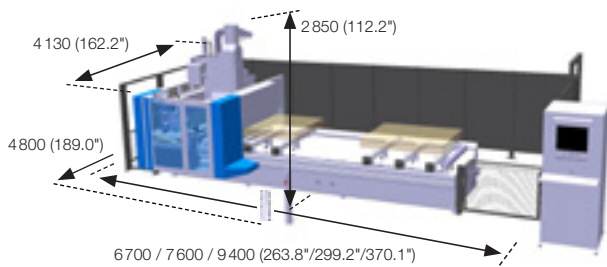
* Dimension with central division. Large alternating field dynamically adapted to component size.

Working field drilling head depending on the configuration.

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



X1 = Single workpiece processing
X2 = Alternating workpiece processing



A member of the HOMAG Group



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