

CNC Processing Centers BMG 110 series | Venture 113|114|115



2016/2017

Freestyle Technology – The New BMG 110 series

Compact technology, a reduced footprint and operational convenience next to the machine – these are the cornerstones of the new machine concept.

Within the BMG 110 series nine configurations are available.

You will find 3-, 4- and 5-axis solutions, e.g. for entering the world of sophisticated horizontal CNC processing.





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Absolute novelty!

Convenience package (Option)

Operating functions can easily be activated via pressing a button directly at the machine. With integrated proximity scanner for intelligent feed reduction.

Everything under control...

Maximal insight into the machine and at the same time optimal protection of the operators by large windows.



Head technology...

3-, 4- and 5-axis equipments available. An all-rounder for ambitious users.

BMG 110 series

- Venture 113 — 3-axis technology
- Venture 114 — 4-axis technology
- Venture 115 — 5-axis technology

360° more freedom...

Integrated switch cabinet, bumper technology and mobile control terminal provide a reduction of the footprint of up to 15% as well as free access from all sides.



Real heavyweight...

Heavy machine frame made of welded steel construction and solid carriage design ensure precise processing.

360° more freedom

Due to the compact design the installation space was reduced by up to 15%.

Additionally, free access to the machine from all sides.

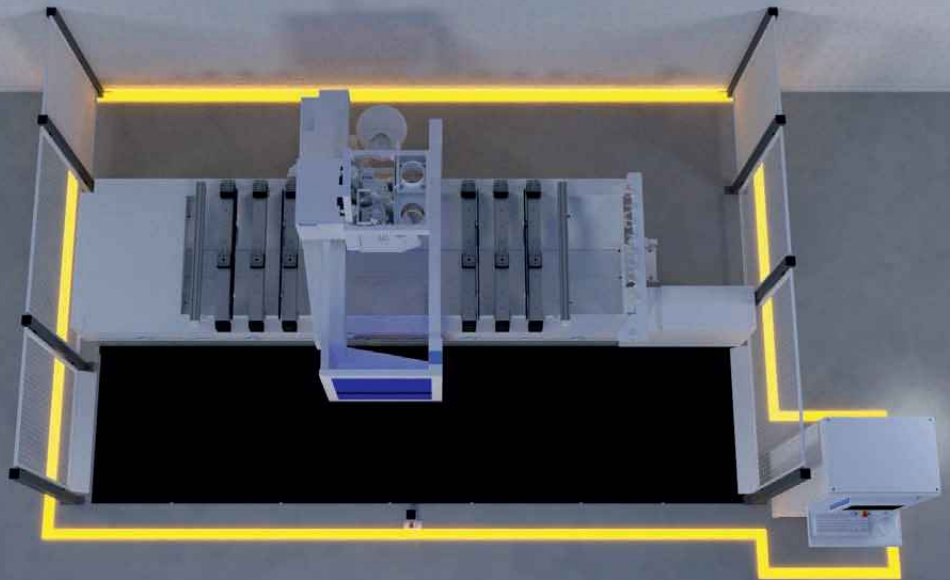
- Switch cabinet was integrated into the machine
- The bumper safety technology replaces the safety protection mats and the protection grids
- Quite a lot of freedom for positioning the mobile operator terminal

-15%

- More efficient utilisation of space
- More variable utilisation of space
- Easy to maintain (clean)

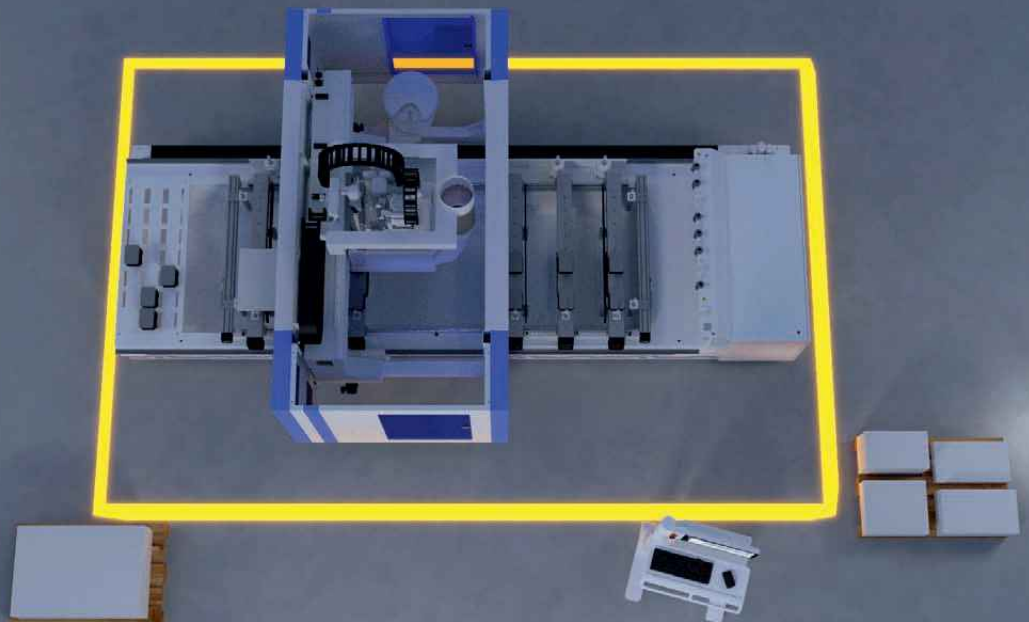
Up to now:

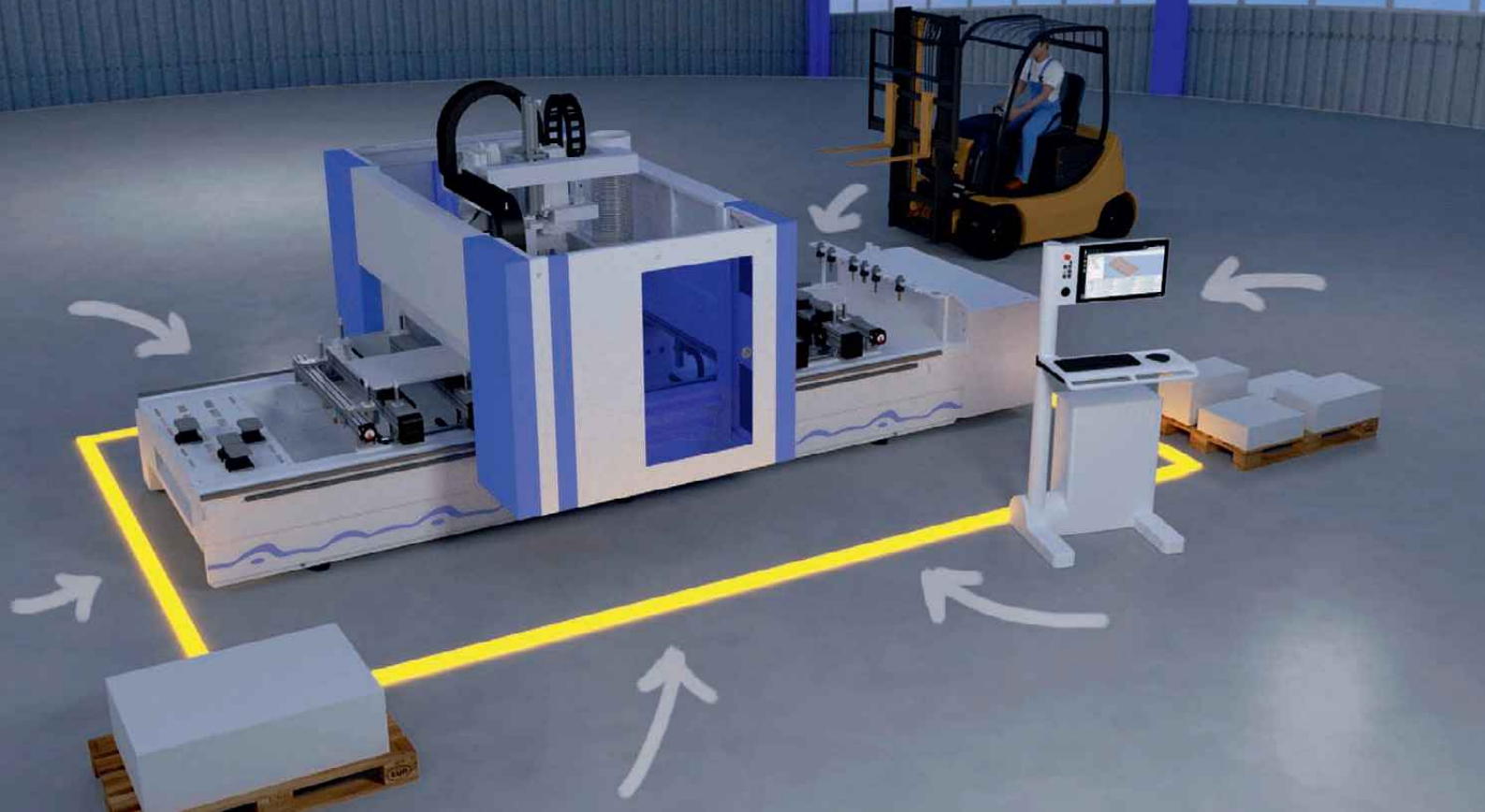
Footprint with safety protection mats and protection grids



From now on:

The required footprint is reduced due to the new safety system





Movable operator terminal with powerTouch

- Free choice of control side
- At any time an optimal glance to the monitor

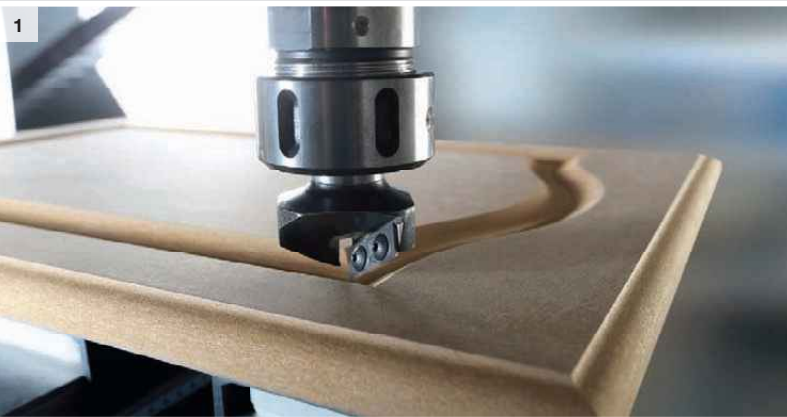


Bumper safety technology

- Stop on contact with bumper
- Saving installation space – safety protection mats are not required
- Easy access to the machine – no protection grids required
- High capacity by 100% utilisation of feed speed

Whatever you want

Deciding in favour of a HOMAG Group 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.



3- and 4-axis applications

1. Profiling furniture fronts
2. Routing lock cases
3. Cutting mitre cuts
4. Cutting recesses for connecting fittings



5-axis applications

5. Mitre cut with high cutting depth for frames
6. Routing of a dovetail joint for upright / transom constructions
7. Chamfer trimming on a table top
8. Square corner routing for a glass rebate
9. Lock case routing
10. Step drilling for drill-in hinges
11. Precise, splinter-free miter cuts
12. Holes for paling at narrow angles

Routing spindles | Solutions for all requirements

Connections fit to the future – Our interfaces feature patented technologies which allow to upgrade the operating spectrum of your plant. Thus, you can dispose of a nearly unlimited production scope. Depending on your requirements you can use different tools or heads in up to 5 axes.

3-/4-axis



Air-cooled routing spindle

Efficient, solid and proven routing spindles with air-cooling with 9 kW (13.2 option) routing capacity

C axis

Interpolating C-axis (Venture 114) with 3-point-pneumatic interface for heads

FLEX5 aggregate





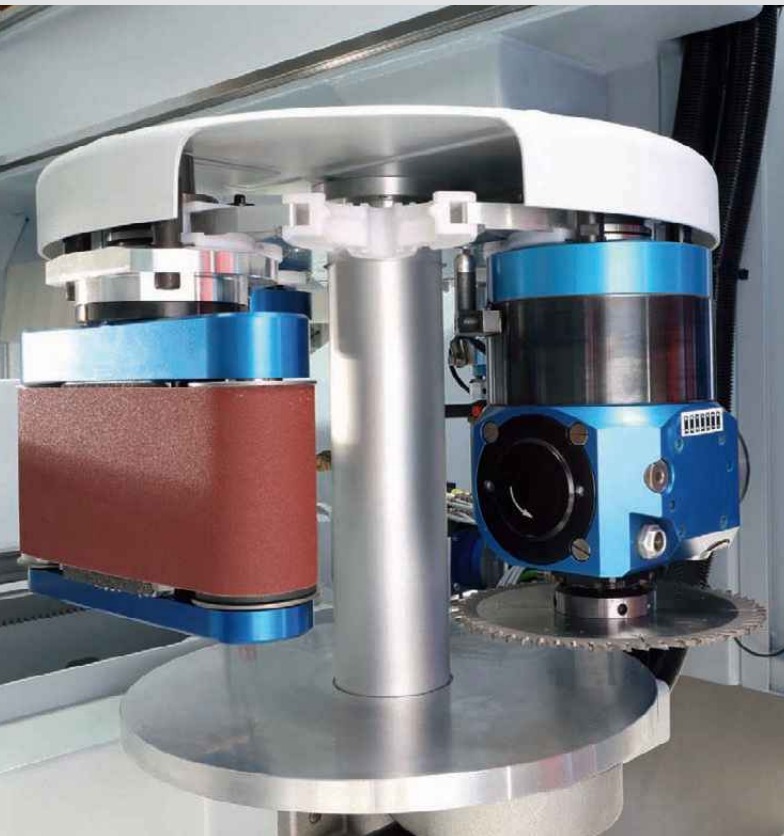
5-axis

DRIVE5CS

The new smart DRIVE5CS 5-axis-head: Compact design with short power transmission. Comprehensive technology on small space without limits regarding the processing range. Liquid-cooled spindles with 10 kW (option 12kW routing capacity).

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. Right from the beginning you get up to 22 tool changing places.



Tool changer

8-fold tool changer moving in X-direction



Tool changer

14-fold tool changer moving in X-direction



Tool changer



8-slot linear tool changer [Venture 113 | 114]

Additional tool change magazine with 8 slots and integrated tool pick-up station, laterally installed.

7-slot linear tool changer [Venture 115]

Additional tool changing magazine with 7 slots and integrated tool pick-up station, laterally installed.

One slot is prepared to accommodate a saw with a diameter of 350 mm.



Tool pick-up station

Safe and quick fitting of the tool changer

WEEKE drilling technology

- **Low-maintenance gears**
Robust, durable technology for permanent industrial use, no wearing belts
- **Rotational speeds up to 7.500 RPM**
High speeds for optimal quality with high drilling speeds
- **Patented spindle clamping**
Easy achievement of drilling depth and constant drilling speed – as programmed
- **Advance and reverse stroke by pneumatic cylinder**
Faster stroke and together with spindle clamping more precise processing

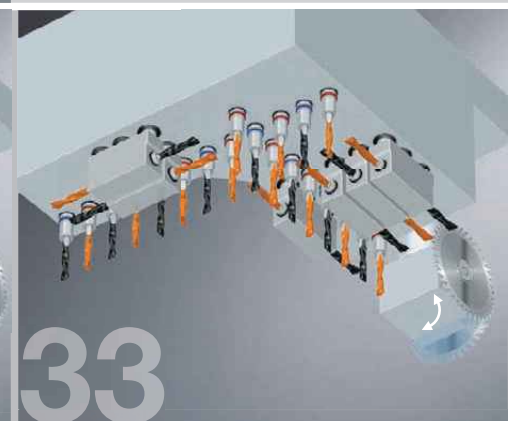
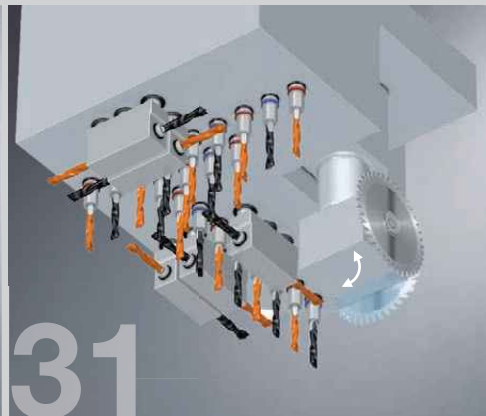
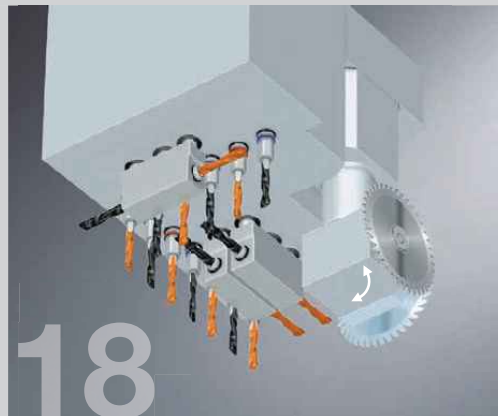


Drilling gear V12/H6 [Venture 115]

- 18 drilling spindles [High-Speed 7500]
(12 vertical | 6 horizontal)
- Grooving saw Ø 125 mm (0° / 90°)

Drilling gear V21/H10 [Venture 115]

- 31 drilling spindles [High-Speed 7500]
(21 vertical | 10 horizontal)
- Grooving saw Ø 125 mm (0° / 90°)



Drilling gear V12/H6 [Venture 113 | 114]

- 18 drilling spindles [High-Speed 7500]
(12 vertical | 6 horizontal)
- Grooving saw Ø 100 mm

Drilling gear V17/H10 [Venture 113 | 114]

- 27 drilling spindles [High-Speed 7500]
(17 vertical | 10 horizontal)
- Grooving saw Ø 125 mm (0° / 90°)

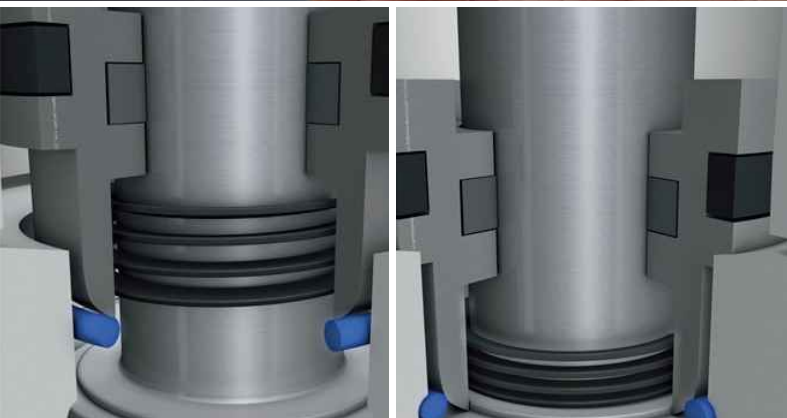
Drilling gear V21/H12 [Venture 113 | 114]

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(21 vertical | 12 horizontal)
- Grooving saw Ø 125 mm (0° / 90°)



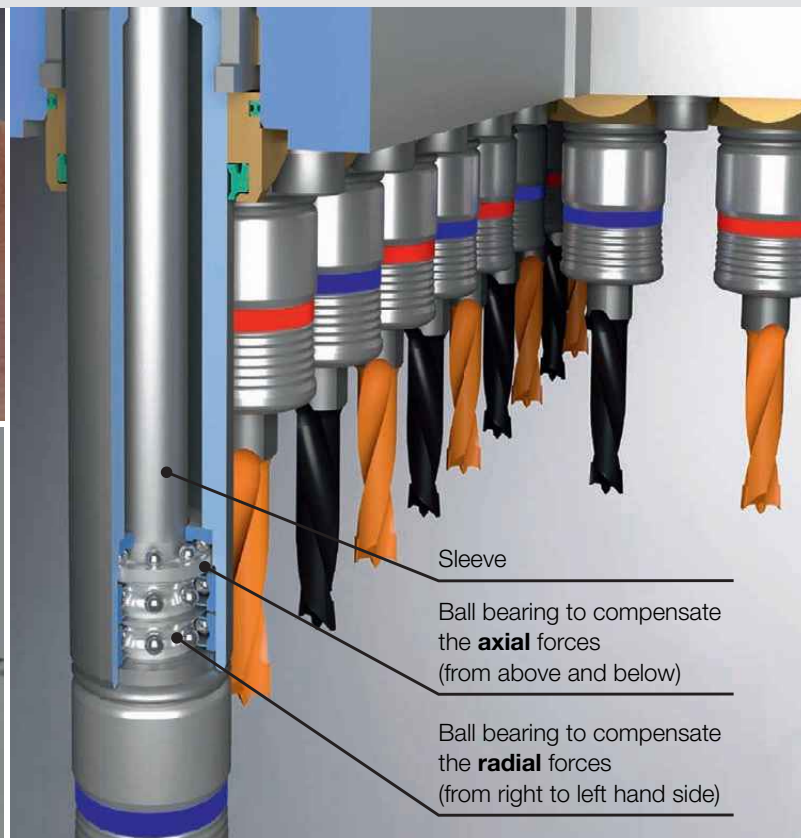
High-Speed 7500

Drilling spindles with 1500 - 7500 RPM incl. the patented quick change system



Automatic spindle clamping system

Patented system for exact drilling depth at any time with different materials



Sleeve

Ball bearing to compensate the **axial** forces (from above and below)

Ball bearing to compensate the **radial** forces (from right to left hand side)

WEKE drilling technology – the top of the line

- The compensation of forces from all sides provides highest drilling quality. The more powerful the application, the more important is this feature.
- The clever arrangement of the drilling spindle ensures a constant distance between drill bit and bearing, whether the spindle is extended or not. Together with the diameter of the sleeve, this feature ensures highest lateral stability and precision during the drilling process.

powerTouch in the standard

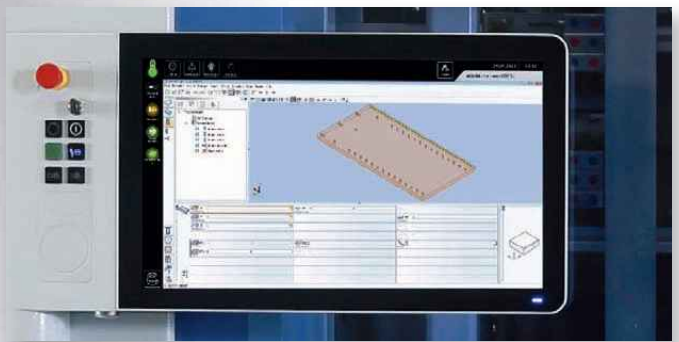


powerTouch implements the HOMAG Group's new operating philosophy: **Easy, equal, ergonomic and evolutionary.** The innovative touchscreen operating concept unites design and function to create a totally new control generation.



powerControl with powerTouch

- 21" Full-HD multitouch display with wide screen 16:9
- Efficient Windows IPC and Intel CPU
- USB frontside bus
- Ethernet connection 10/100 Mbit
- Hand terminal for setting mode



Easy

Integrated help and assistant functions are available to simplify working.

Equal

powerTouch controls HOMAG Group machines using standardized operating elements and software modules with the same look and feel.

Ergonomic

Direct control using touch-sensitive touchscreen monitor which can be used to access machine functions.

Evolutionary

Standardized machine control combined with state-of-the-art operating concepts and standardized multitouch monitors.

Console table

Clean and fast: the console table – the classic table with single-circuit vacuum system. The vacuum clamps are steplessly positioned and offer clearance for the use of tools and for dropping waste pieces. As standard, the exact positioning is supported by scales and pointers. LED and laser positioning aids are provided for fast and easy positioning of suction cups.

Measuring tape

For positioning of suction cups

Laser positioning (optional)

Simple positioning of the vacuum cups through the pin laser

LED positioning system

LED-lights exactly indicate the operator where to position suction cups and consoles
→ positioning faster by 70 %



Electronic cylinder surveillance

Improved safety by electronic surveillance of all stop cylinders



Stops for veneer overhang (optional)

Ensures easy positioning in the case of veneer overhang

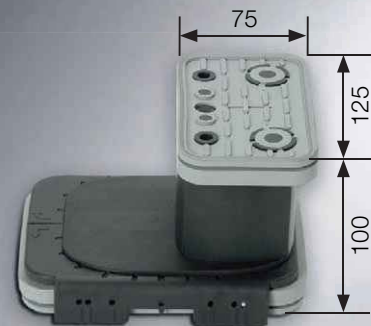
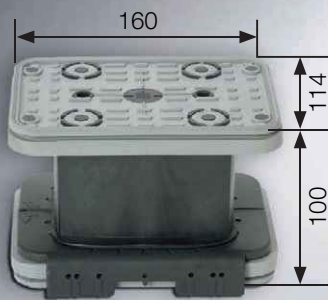
Console table

Vacuum cups – wide

- 12 vacuum cups (table length M | 3100 mm)
- 16 vacuum cups (table length L | 4200 mm)

Vacuum cups – narrow

- 6 vacuum cups (table length M | 3100 mm)
- 8 vacuum cups (table length L | 4200 mm)



Workpiece feeding rail

Solid feeding rails to ease placing of heavy workpieces



Suction cup storage area

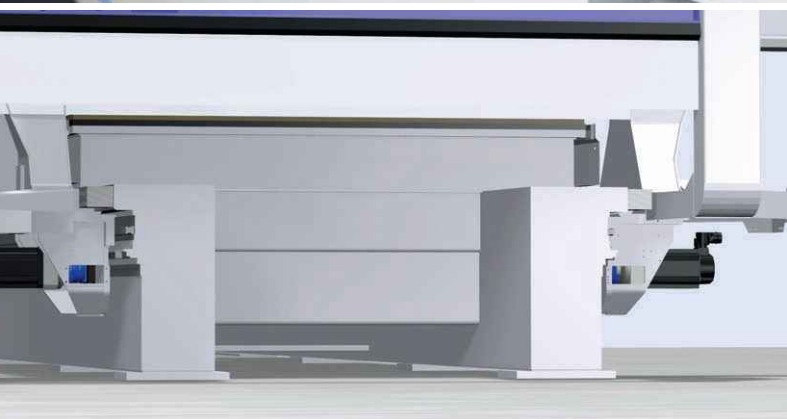
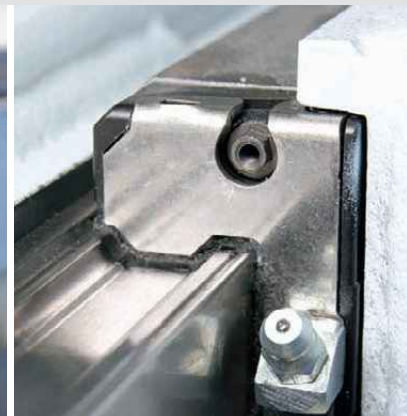
Storage area laterally integrated into the machine for vacuum suction cups for easy and fast access

Quality – today for tomorrow

You require a suitable basis in order to provide highest performance.
Already as standard we rely on high-quality and proven components.
Fully equipped right from the beginning.

Linear guiding system

Long-lasting linear guiding system with cover and plastic sealings. High-quality protection against dust and dirt. Provides sustainable exactness.



Synchronous drive

2 synchronised digital servo-drives in X-direction guarantee highest precision



IO-Link

IO-link-connections

- Diagnosis/remote service down to the lowest level provided
→ faster analysis
- Allows very detailed analyses by direct reading of complex data sets





ecoPlus – energy saving function

- Simple activation of the stand-by mode
- Vacuum pump is switched off (savings of up to 12%)
- Reduction of compressed air (savings of up to 6%)



Software



woodWOP

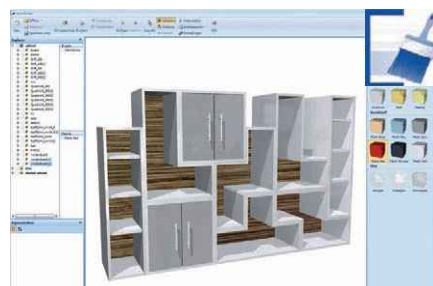
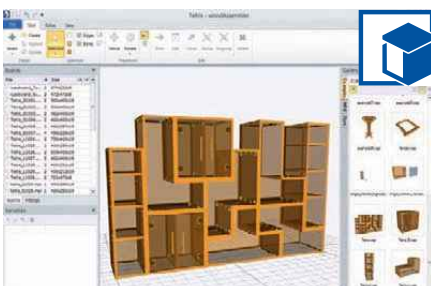
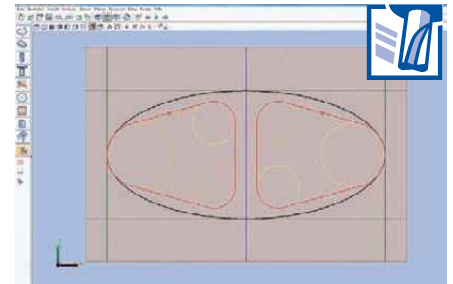
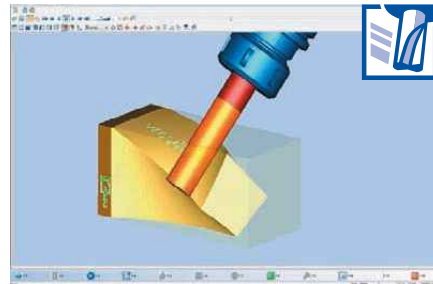
- Modern software based on Windows®
- More than 30.000 installations worldwide
- Biggest forum for CNC programming in the Internet:
www.woodWOP-Forum.de

woodWOP CAM-Plugin

- Fast constructing of 3 surfaces with CAD-Plugin or through import of 3D models
- Automatic generation of routing path from 3-axis up to interpolating 5-axis processing

woodWOP CAD-Plugin

- CAD drawings can be generated directly at the machine and at the production engineering workstation
- Import of CAD drawings in DXF format



woodAssembler

- To visualize woodWOP-programs (MPR) in 3D
- Enables the construction of individual workpieces to finished objects

woodVisio

- Objects generated in woodAssembler or Blum Dynalog can be provided with surface materials
- The objects are displayed in a free-standing position

3D CNC-Simulator

- Simulates the processing acc. to the order set in the NC program
- Allows time calculation
- Collision check of the vacuum cups



Software

woodWOP DXF-Import Basic

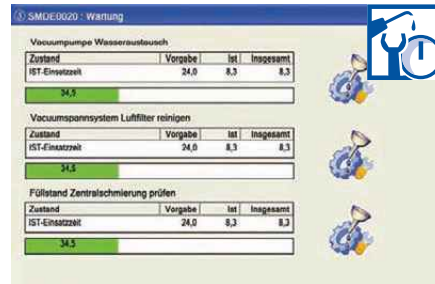
- Interface for CAD-Data import
- Automatic generation of woodWOP programs on the basis of CAD drawings
- Assignment of processing via defined layer names

Machine Data Recording Basic

Collecting and evaluating machine states via time meter and event meter

Graphical tool database

- Dimensioned graphics for simple set-up and management of tools and units
- 3D view of tools



	woodWOP Maschine	woodWOP Office	MMR basic	woodWOP DXF-Import Basic	woodAssembler	woodNest basic	3D CNC-Simulator Office	3D CNC-Simulator Maschine	CAM-Plugin professional Maschine	CAM-Plugin professional Office
Standard equipment	✓	✓	✓	✓						
Office-Package »Basic«					✓	✓	✓			
Software-Package »5-axis«								✓	✓	✓

Options

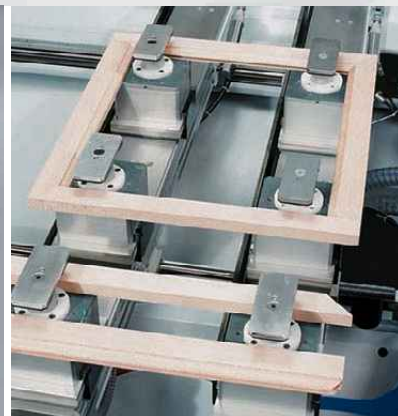
Chip transport

Wide chip conveyor integrated in the machine frame for easy disposing of the chips and waste parts



Multi clamping system

E. g. for frames and small parts



PowerClamp

E.g. for processing of solid wood components on 6 sides (lowerable base plate)



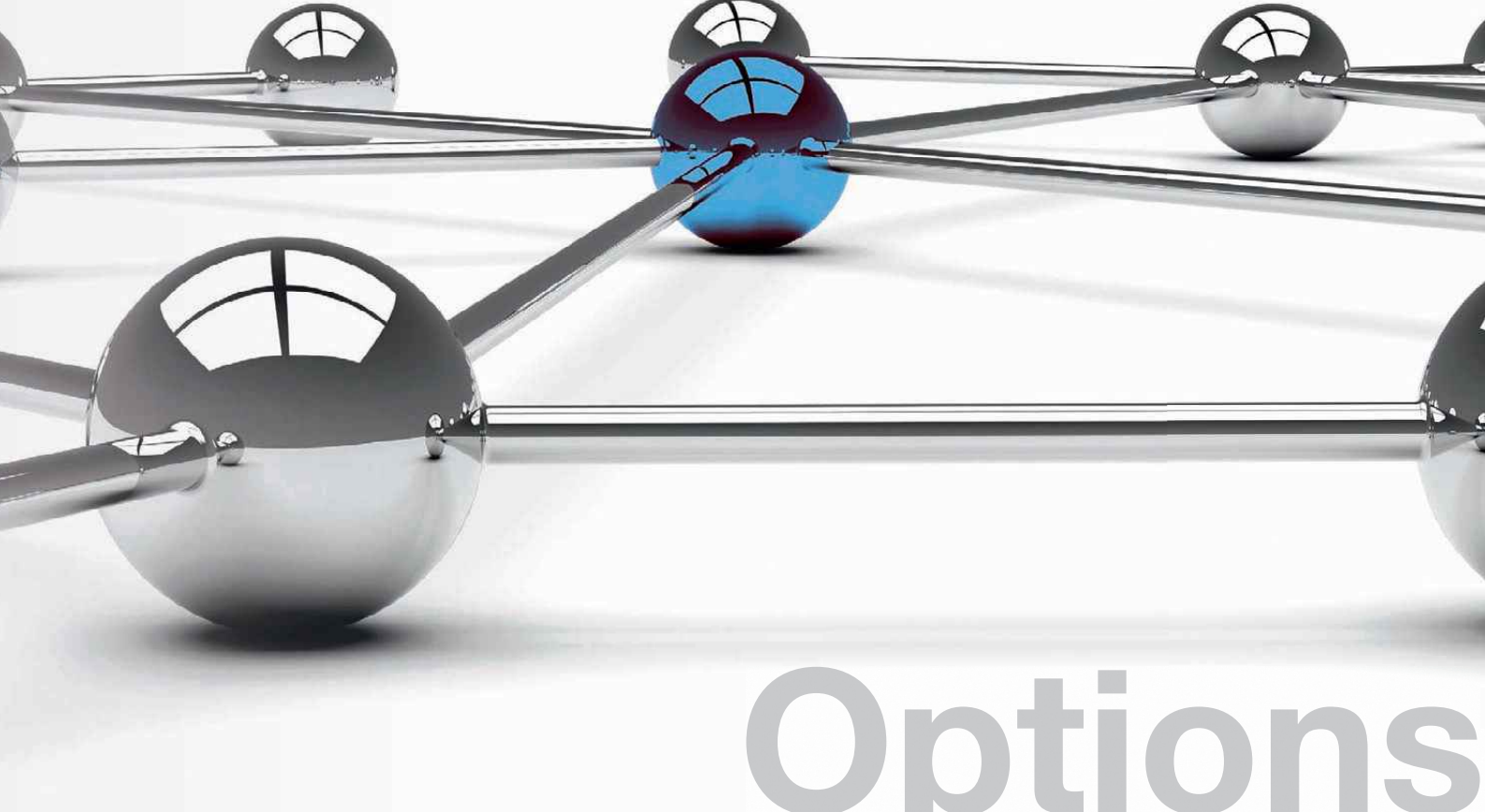
Rear row of stops

8 solid stop bolts (6 rear | 1 right | 1 left) pneumatically lowerable and incl. electronic cylinder surveillance



Air-conditioning

Air-conditioned switch cabinet



Options



Picture shows an example-STARTER KIT for the Venture 114

Tool box »STARTER KIT«

For every type appropriate STARTER KITS and tool accessories



Extension to FLEX5 (for Venture 114)

Consisting of:

- FLEX5 interface
- FLEX5 head

Option | Convenience Package

Machine-related handling taken literally.

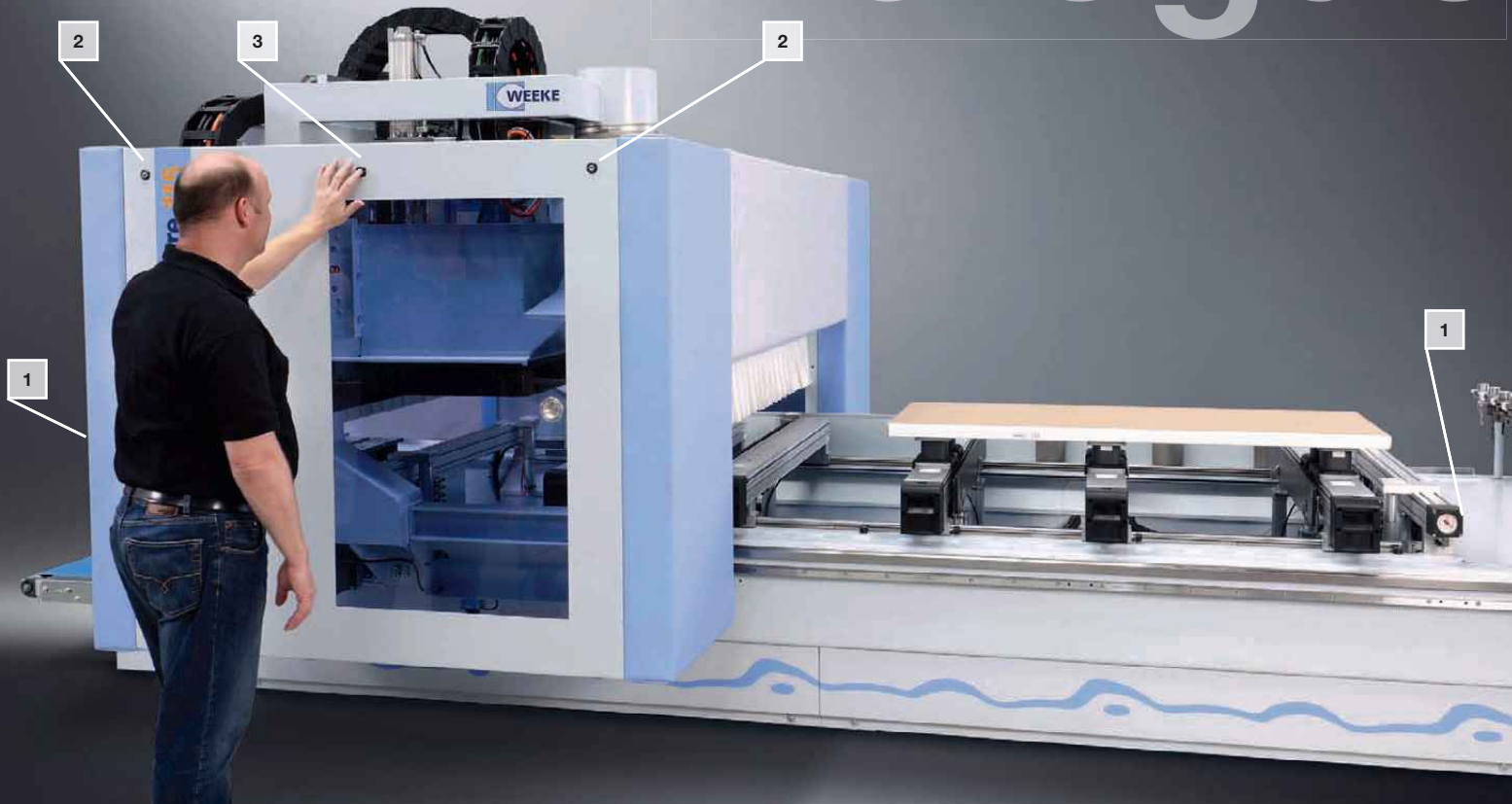
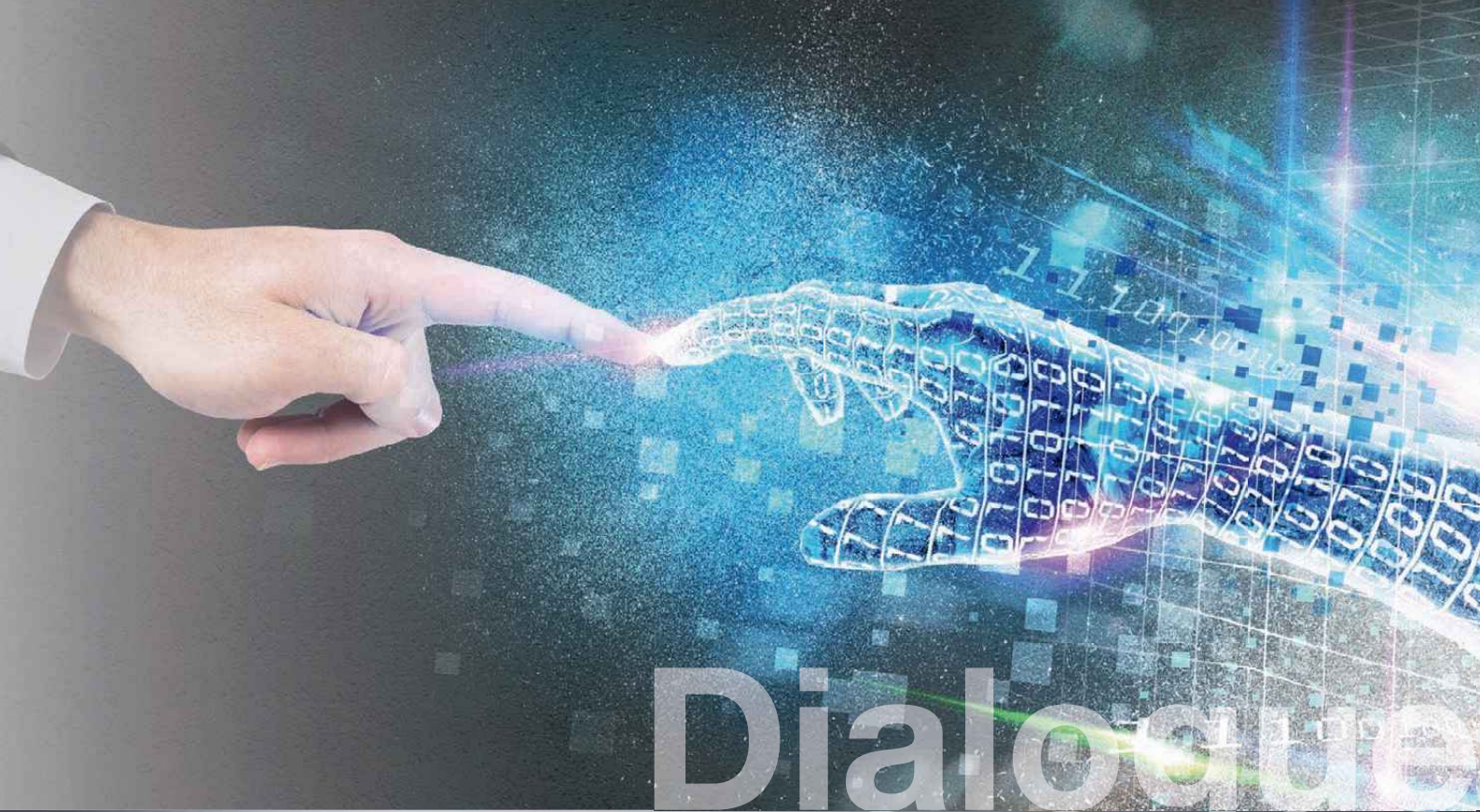
The convenience package allows to control three functions directly at the machine body: start/pause, relieve and hood adjustment.

In addition, the function of the laser scanner: When the operator is in the scanning area, the programme is stopped. For further processing acknowledgement is required at the machine. Scanner and buttons considerably simplify and accelerate the machine handling. Mainly in alternate operation.



Laser scanner

The laser scanner scans the positioning range in X-direction in front of the machine. If there is a person within an area of 600 mm left or right from the active bumper surface, the machine is stopped even prior to touching the bumper. When the person leaves the scanning area, the machine stop can be cancelled by means of the start button. The axes are decelerated to the programmed speed.



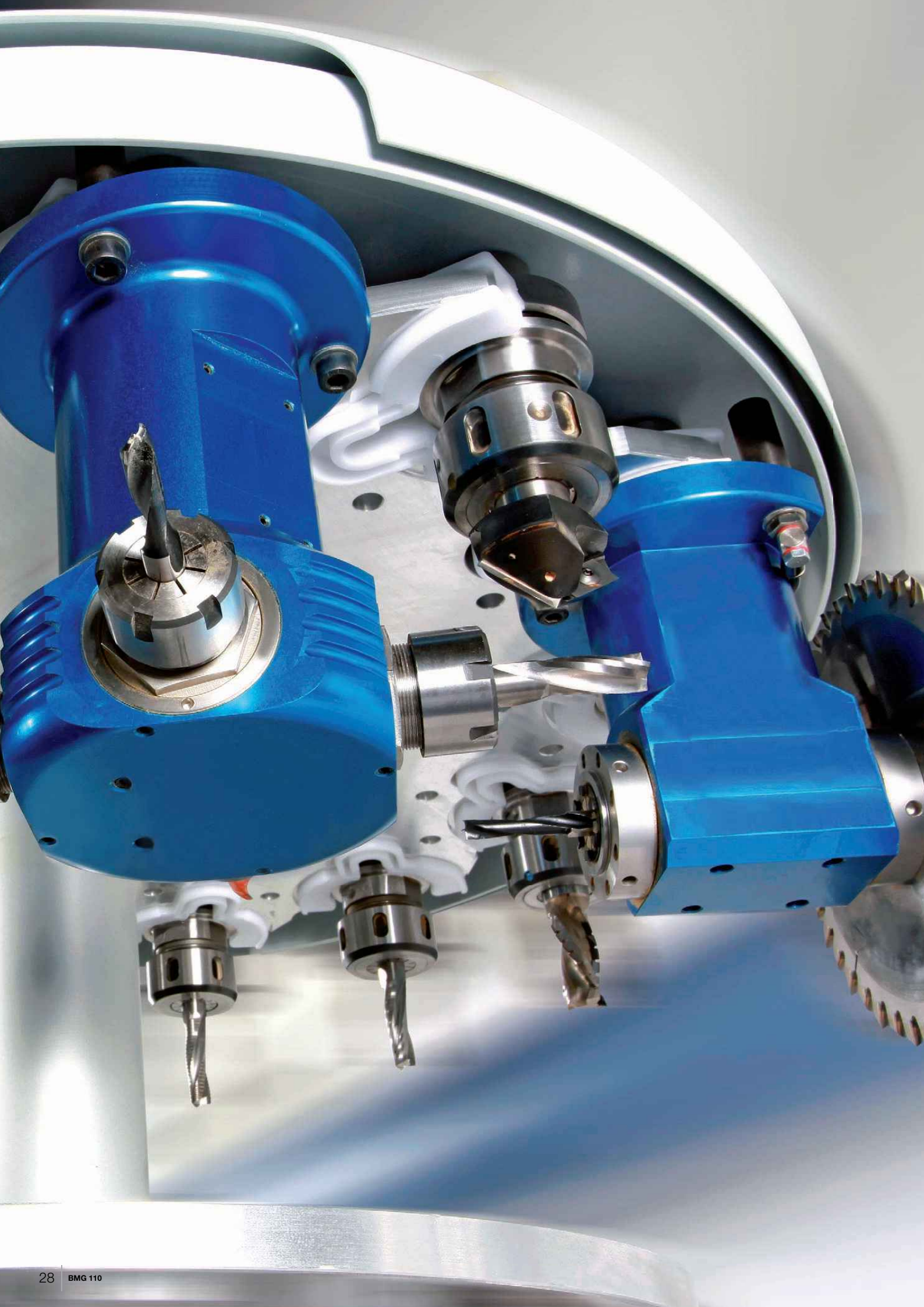
Start programme



Start programme / relieve / pause programme



Raise/lower hood programme



Options | Heads for 4-axis equipment







Range of modular units for flexible working

The heads required for the respective processing steps are fully automatically changed from the tool changing system into the main spindle of the machine. They can be swivelled from 0 to 360° over the C-axis.

You get a great deal of flexibility and thus sufficient room to implement your own ideas.

Always the optimal solution for your specific tasks.

Aggregates

HIGH PERFORMANCE					
	High Performance Sawing*	High Performance Drilling/Sawing/Routing*, 2 spindles	High Performance Cam box router*, 2 spindles	High Performance Drilling/Sawing*, swivelling, (0° - 90°)	FLEX5 Drilling/Sawing/Routing*
					FLEX5
					
	Drilling/Routing/Sawing*, 2 spindles	Drilling/Routing*, 4 spindles	Cam box router*, 2 spindles	Drilling/Sawing, swivelling*, (0° - 90°)	Drilling/Routing, swivelling, cranked*, (0° - 90°)

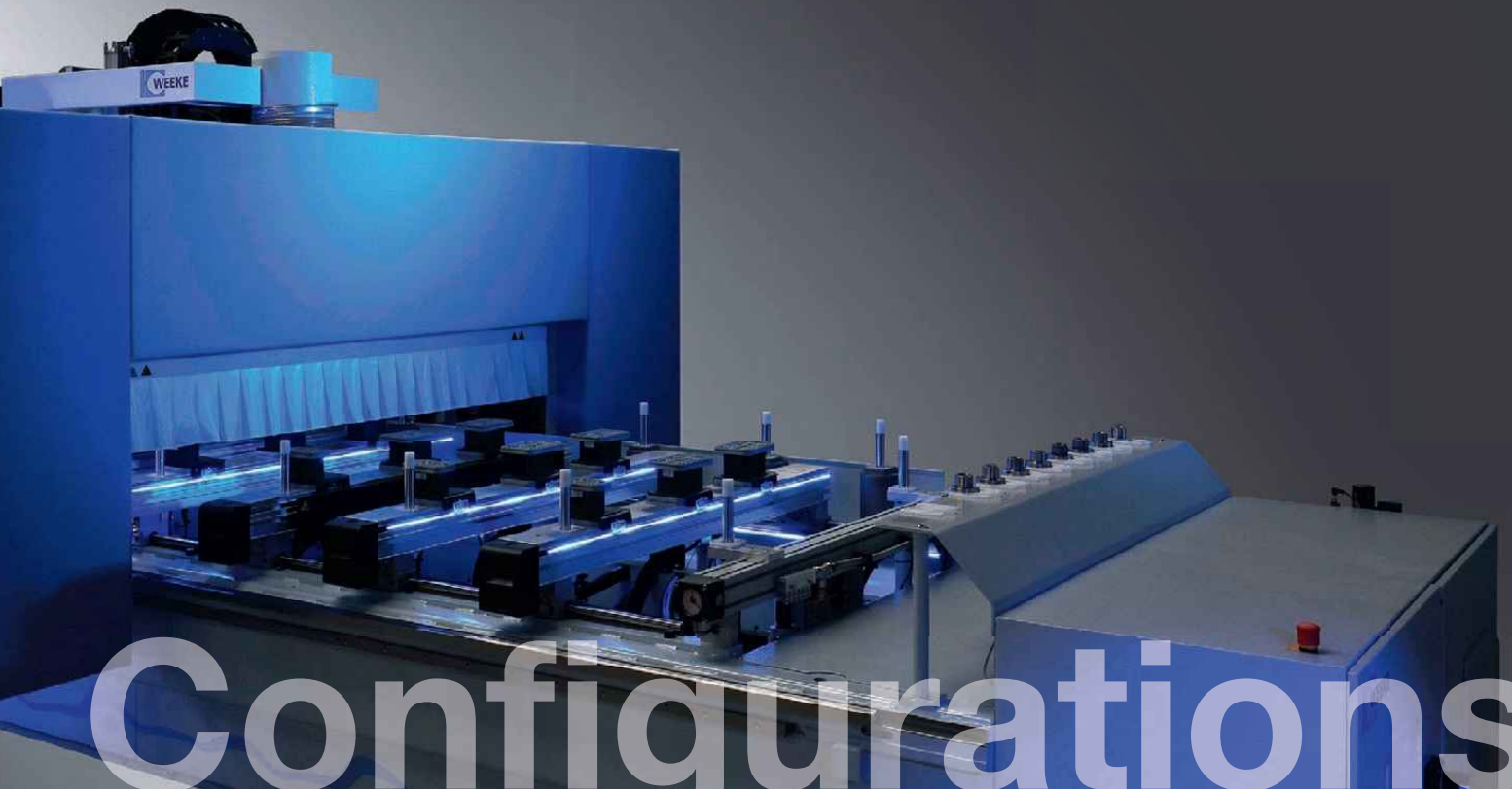
* For maximum tool lengths and diameters see the respective technical data sheet

Summary | Configurations

It's your choice. One package available for all current demands. Thus, all requirements are fulfilled.



		Spindle		C-axis	Tool changer			
		Standard	Option		Travelling tool changer		Lateral linear tool changer	
					8-fold	14-fold	7-fold	8-fold
3-axis Venture 113	Basic	10 kW	13,2 kW		✓			✓
	Future	10 kW	13,2 kW			✓		✓
	Performance	10 kW	13,2 kW			✓		✓
4-axis Venture 114	Basic	10 kW	13,2 kW	Interpolating	✓			✓
	Future	10 kW	13,2 kW	Interpolating		✓		✓
	Performance	10 kW	13,2 kW	Interpolating		✓		✓
5-axis Venture 115	Basic	10 kW	12 kW	DRIVE5CS	✓		✓	
	Future	10 kW	12 kW	DRIVE5CS		✓	✓	
	Performance	10 kW	12 kW	DRIVE5CS		✓	✓	



Drilling gear

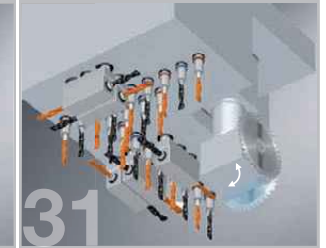
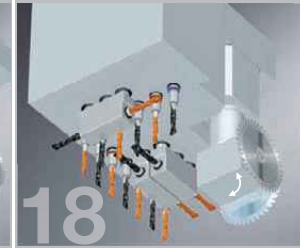
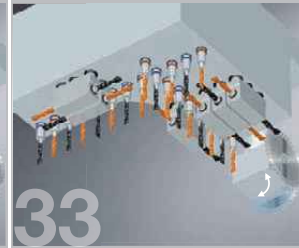
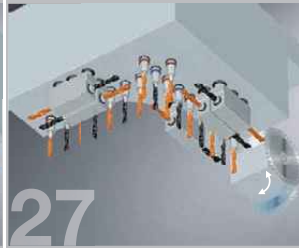
V12H6 S0°

V17H10 S0/90°

V21H12 S0/90°

V12H6 S0/90°

V21H10 S0/90°



- 18 drilling spindles [High-Speed 7500] (12 vertical | 6 horizontal)
- Grooving saw Ø 125 mm

- 27 drilling spindles [High-Speed 7500] (17 vertical | 10 horizontal)
- Grooving saw Ø 125 mm (0° / 90°)

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✓				
	✓			
		✓		
✓				
	✓			
		✓		
			✓	
			✓	
				✓

HOMAG Group LifeCycleService

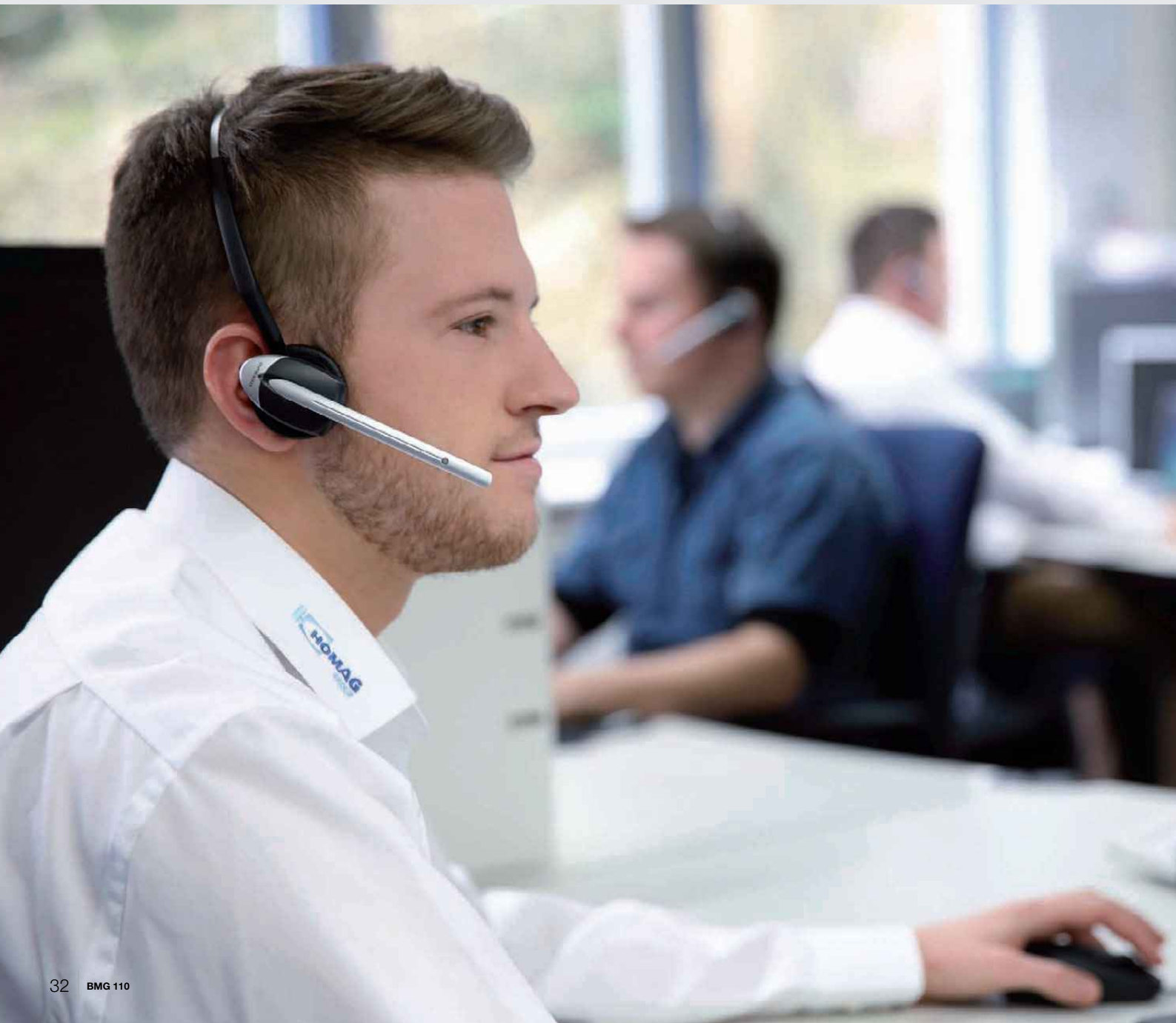
The sale of our machines comes with all-in optimum service backup and individual advice.

We support you with service innovations and products which are especially tailored to your requirements.

With short response times and fast customer solutions we guarantee consistently high availability and economical production – over the entire life cycle of your machine.



LifeCycleServices





HOMAG Finance – precisely the right financing

We offer you tailored financing proposals for your machinery or plants. Our financial advice goes hand in hand with our expertise relating to technical questions. Your personal contact person will take care of the whole process.

The benefit for you: The ability to invest without delay in new technologies and remain financially flexible.



Your success in best hands all over the world

The HOMAG Group is present with **1.200 service employees** around the world and also relies on more than 60 skilled partners in over 50 countries. We offer a seamless technical support network in order to guarantee the maximum availability of your machines and plants.

1,200
Service employees
around the world

85,2 %
less on-site-services through
successful remote diagnosis

650
processed spare parts
orders / day

>150 000
machines, all electronically
documented in 28 different
languages – in **eParts**



Remote Service

- Hotline support via remote diagnosis regarding control, mechanics and process technology. Thus the on-site service can be reduced by 85.2 %!
- Mobile applications such as **ServiceBoard** reduce the costs through fast help in case of troubles by mobile live video diagnosis, online service message and the online spare parts shop eParts



Spare Part Service

- Identify, request and order spare parts around the clock via www.eParts.de
- Local availability of parts offered by our sales and service companies as well as sales and service partners all over the world
- Reduction of downtimes through defined spare parts and wear parts kits



Modernization

- Keep your machinery up-to-date and increase your productivity as well as your product quality. This is how you can meet tomorrow's requirements today!
- We support you with upgrades, modernization as well as individual consultancy and developments



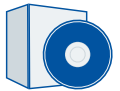
Trainings

- The trainings perfectly suit to your requirements. Through this your machine operators can operate and maintain the HOMAG Group machines optimally.
- The trainings also include customer-specific training documents with practice-proven exercises



Software

- Telephone support and consultancy through software support
- Digitalization of your spare parts via 3D scanning saves time and money compared to new programming
- Subsequent networking of your machinery with intelligent software solutions ranging from construction to production



Field Service

- Increased machine availability and product quality by certified service staff
- Regular checks through maintenance / inspection guarantee the highest quality of your products
- We offer you the highest availability of technicians in order to reduce downtimes in case of unpredictable troubles



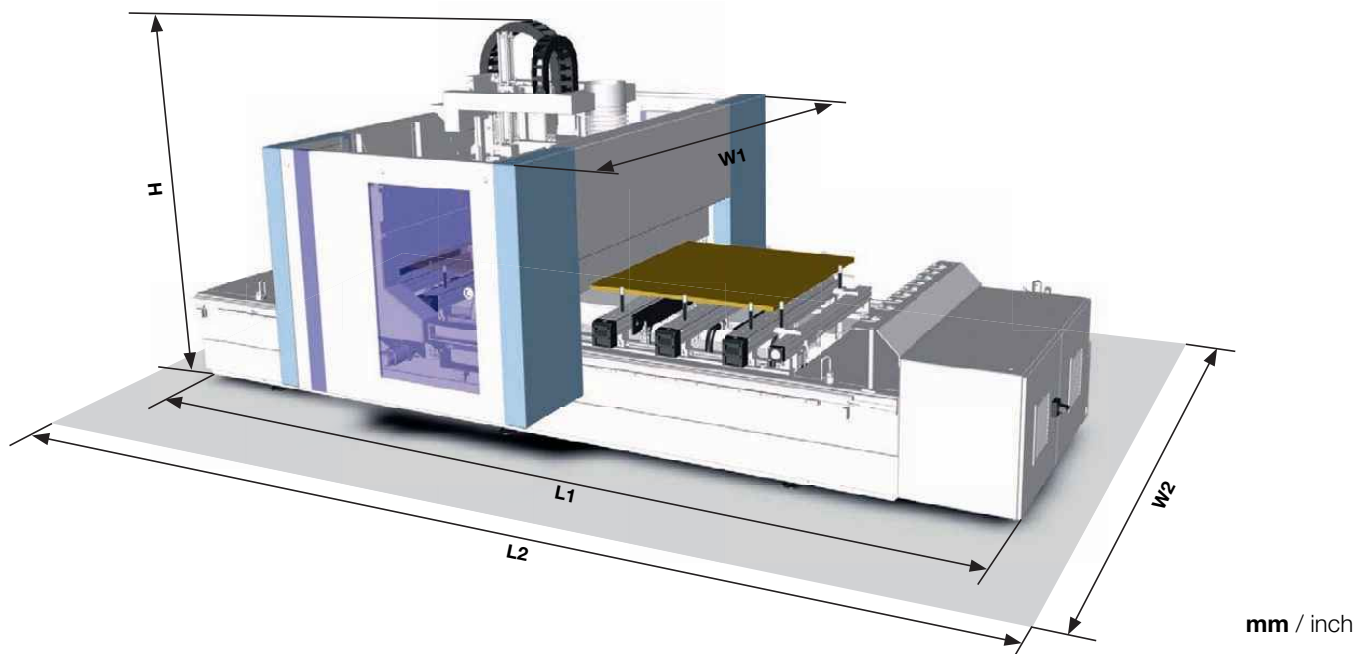
Technical Data | Configurations*

			Venture 113 [BMG 110]		Venture 114 [BMG 110]		Venture 115 [BMG 110]	
Working field			M	L	M	L	M	L
Working length	X	mm / inch	3100 / 122.0	4200 / 165.4	3100 / 122.0	4200 / 165.4	3100 / 122.0	4200 / 165.4
Workpiece clearance	Y	mm / inch	1600 / 63.0	1600 / 63.0	1600 / 63.0	1600 / 63.0	1600 / 63.0	1600 / 63.0
Routing dimension	Y	mm / inch	1550 / 61.0	1550 / 61.0	1550 / 61.0	1550 / 61.0	1400 / 55.1	1400 / 55.1
Vertical drilling	Y	mm / inch	1550 / 61.0	1550 / 61.0	1550 / 61.0	1550 / 61.0	1550 / 61.0	1550 / 61.0
Workpiece thickness	Z	mm / inch	160 / 6.3	160 / 6.3	160 / 6.3	160 / 6.3	160 / 6.3	160 / 6.3
Travel range	X	mm / inch	3875 / 152.6	4975 / 195.9	3875 / 152.6	4975 / 195.9	4010 / 157.9	5110 / 201.2
	Y	mm / inch	1950 / 76.8	1950 / 76.8	1950 / 76.8	1950 / 76.8	2081 / 81.9	2081 / 81.9
	Z1	mm / inch	Z1: 350 / 13.8	Z1: 350 / 13.8	Z1: 350 / 13.8	Z1: 350 / 13.8	Z1: 405 / 15.9	Z1: 405 / 15.9
	Z2	mm / inch					Z2: 335 / 13.2	Z2: 335 / 13.2
Alternating operation		mm / inch	1025 / 40.4	1575 / 62.0	1025 / 40.4	1575 / 62.0	1025 / 40.4	1575 / 62.0
Assignment of working fields		mm / inch	1250 / 49.2	1800 / 70.9	1250 / 49.2	1800 / 70.9	1250 / 49.2	1800 / 70.9

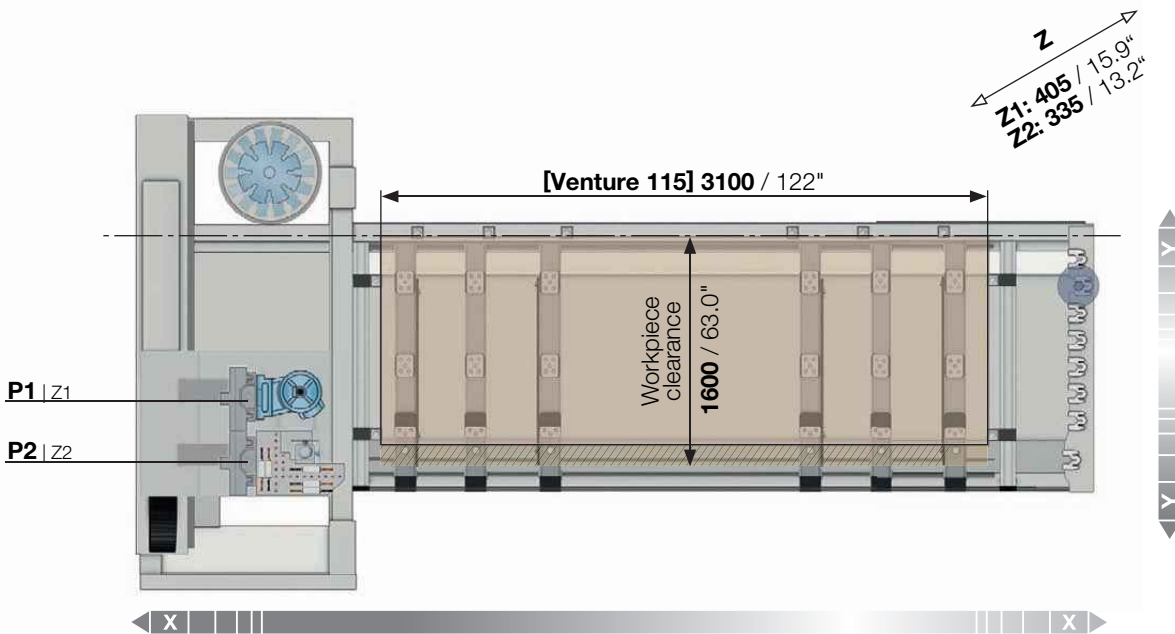
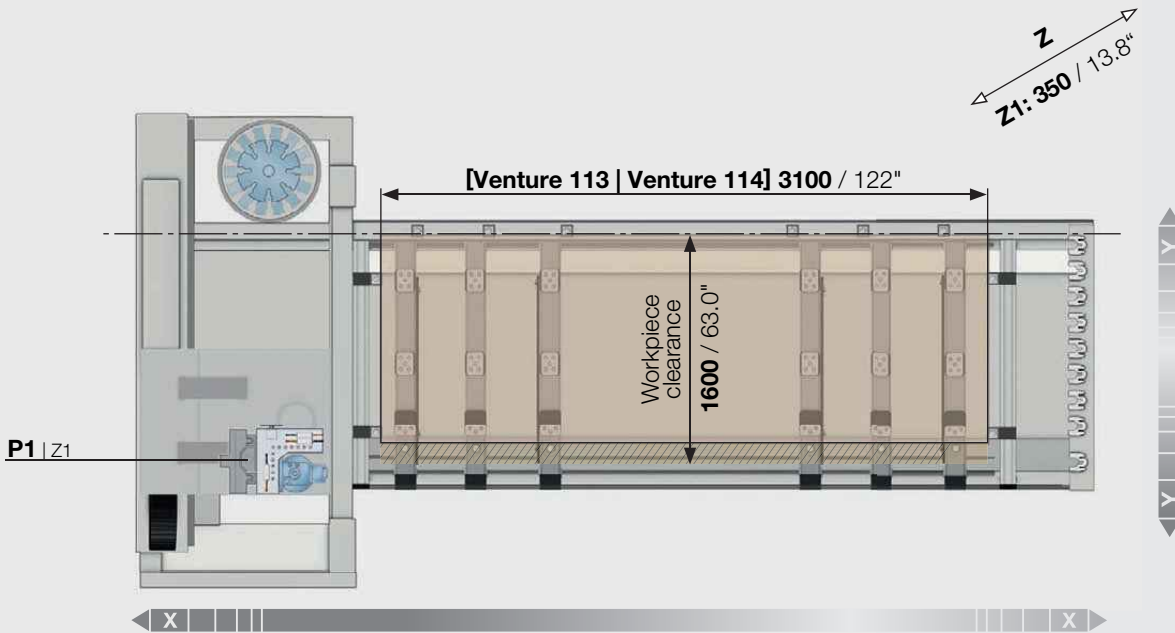
Technical data		M	L	M	L	M	L
Vector speed	X-Y	61	61	61	61	61	61
Compressed air	bar	7	7	7	7	7	7
Extraction connection	mm	Ø 250	Ø 250	Ø 250	Ø 250	Ø 250	Ø 250
Total extraction capacity	m³/h	min. 4950	min. 4950	min. 4950	min. 4950	min. 4950	min. 4950
Total machine weight	approx. kg	3250	3250	3250	3250	3500	3500
Connected load	kW	17	17	18	18	20	20

Installation dimensions		M	L	M	L	M	L
L1	mm / inch	5930 / 233.5	7030 / 276.8	5930 / 233.5	7030 / 276.8	5930 / 233.5	7030 / 276.8
L2	mm / inch	6850 / 269.7	7950 / 313.0	6850 / 269.7	7950 / 313.0	6850 / 269.7	7950 / 313.0
W1 (with 8-fold tool changer)	mm / inch	3110 / 122.4	3110 / 122.4	3110 / 122.4	3110 / 122.4	3550 / 139.8	3550 / 139.8
W1 (with 14-fold tool changer)	mm / inch	3550 / 139.8	3550 / 139.8	3550 / 139.8	3550 / 139.8	3550 / 139.8	3550 / 139.8
W2	mm / inch	4110 / 161.8	4110 / 161.8	4110 / 161.8	4110 / 161.8	4550 / 179.1	4550 / 179.1
H	mm / inch	2400 / 94.5	2400 / 94.5	2400 / 94.5	2400 / 94.5	2650 / 104.3	2650 / 104.3

* **Note:** Depending on the configuration, please see the data in the corresponding technical data sheet.



Technical Data | Configurations*



Venture 113 | 114



Venture 115



Pictures may also show options

mm / inch

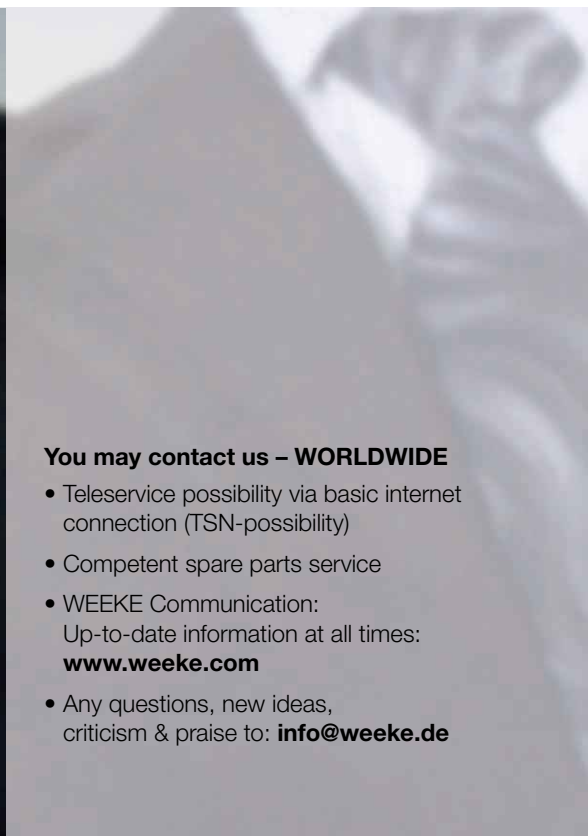


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