Quotation CENTATEQ P-110 (Venture 115 BMG 110/31/F/K)

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P1.1.2.1 **CENTATEQ P-110** **Quantity: 1**
Venture BMG110/31/F/K

HOMAG CNC processing center

CNC-controlled machining center in gantry design for machining wood and wood-like materials. Designed for 1 main spindle, mounted on the right side of the gantry cross rail.

Basic machine

- Machine base frame in sturdy steel frame design
- Gantry driven on both sides for high accuracy and dynamics
- linear guiding systems with dust protection
- rack and pinion drives for X and Y axis
- - Circulating ball spindle for Z axis
- Drive technology with digital control methods for high dynamics and contour accuracy
- Central connection for the customer's extraction system

- Travel speeds:			
Vector speed of X/Y axis		60	m/min
X axis		35	m/min
Y axis		50	m/min
Z axis		15	m/min

Workpiece parameters

Workpiece length X, all units			
Individual processing	Max	3100	mm
Shuttle machining	Max	1025	mm

Workpiece length X, with tool diameter 25 mm			
Individual processing	Max	3275	mm
Shuttle machining	Max	1025	mm

Workpiece width Y, front stop			
All units	Max	1250	mm
With tool diameter 25 mm	Max	1250	mm

Workpiece width Y, back stop			
All units	Max	1230	
With tool diameter 25 mm	Max	1405	

Workpiece thickness			
Including clamping means	Max	260	mm

Notes

- In individual cases, the permissible workpiece parameters may be reduced depending on the machining process. For details, see the technical data sheets
- The minimum workpiece size depends on: clamping devices, workpiece surface and contour
- The operator is responsible for the use of suitable materials and production equipment

Electrical equipment

- Operating voltage 400 V, 50 Hz
- Control cabinet firmly mounted on the machine bed
- Installed according to European standard EN 60204-1
- Including a potential-free contact for controlling a customer-side suction slide
- The machines are not suitable for connection to an RCD due to operational leakage currents. Instead, it is advisable to route the supply line so as to prevent ground faults or short circuits (e.g. in accordance with DIN VDE 0100-520/521.11)
- Prescribed ambient temperature: + 5 to + 40°C (at ambient temperature >35°C or humidity > 65%, a cooling unit for the switch cabinet is recommended)

Safety and protective equipment

- Pressure-sensitive bumpers according to EN1760-3 for safety monitoring for effective protection of the operating personnel
- EG conformity (CE) according to the currently valid machinery directive for single machine operation
- In accordance with the machinery directive, an additional EU certificate of conformity is required for interlinked machine operation (cells/factory systems) in the defined countries
- Accessibility of the work areas:
  - The machine is accessible from all sides
  - The machine has two work areas, selectable free travel modes allow free travel of the individual work areas
  - For placing and removing workpieces with maximum possible placement length in single operation; the workpiece must be guided under the safety housing

- The prerequisite for our warranty/product liability is the unlimited compliance with the original operating instructions delivered with the machine, including the safety regulations

HOMAG quality package

- Linear guides in the X, Y and Z directions are covered with a metal band to prevent dirt deposits
- TÜV certificate according to DIN EN ISO 9001:2015
- Energy-efficient drive units in accordance with Commission Regulation (EC) no. 640/2009
- Program-controlled extraction hood. The extraction hood is program-controlled in eight steps according to the thickness of the workpiece. It is therefore always at the ideal height above the workpiece and ensures optimum extraction behavior
- Energy-saving function:
  - ECO Plus button to start stand-by operation – this can be activated during the last machining operation and has the following effect after the end of the program:
    - Drives are switched off so that they have no power
    - The vacuum pumps are switched off while taking into account the minimum running time
  - If the machine is not in production, the control voltage is switched off after a preset time
  - If no workpiece is clamped, the vacuum pump is switched off by means of preset time

Technical data and notes

- Connection values and installation instructions for extraction, pneumatics, compressed air and electricity can be found in the separate installation plan
- Floor conditions must correspond to the foundation plan

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P1.1.2.2 **Article no. 0249** **Quantity: 1**

Type plate for the United Kingdom

The CE mark for product safety was replaced by the new British UKCA mark after Brexit. Machines to be exported to the UK (England, Wales and Scotland) must have a UKCA mark as of January 01, 2023. The CE mark remains valid during the transition period until the end of 2022.

- UKCA mark on machine type plate
- UKCA declaration of conformity

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- UKCA mark on machine type plate
- UKCA declaration of conformity

P1.1.2.3 **Article no. 0500** **Quantity: 1**

Painting

Paint the machine and protective fence posts in RAL 9003 signal white
Design stripes, protective fence fields, protective doors and column in RAL 7021 black gray

P1.1.3.1 **Article no. 9220** **Quantity: 1**

around operation package 1

Saving on equipment package

- Includes:
  Convenient operation
  Tool length monitoring

P1.1.3.2 **Article no. 1255** **Quantity: 1**

DRIVE5CS Future 12 kW

Price advantage equipment package. Includes:

- Processing spindle
- Drilling gear
- Tool changer

P1.1.3.3 **Article no. 1237** **Quantity: 1**

K table LED 'M'

Saving on table package

- Consoles and insertion aids
- Stops
- LED setup aid

FIXED FUNCTIONS

P1.1.4.1.1 **Article no. 1724** **Quantity: 1**

Fixed lateral linear tool changer, 10 positions

For transferring and receiving tools and units with HSK-F63

- Mounted on the side of the machine bed
- With integrated tool transfer position

Technical data for the tool changer			
Number of slots		10	pcs
Distance between the positions		108	mm
Weight of tools incl. chuck	Max	6	kg
Weight of units	Max	8	kg
Weight when fully equipped	Max	40	kg

Technical data for tools/units			
Tool diameter		10x104	mm
Tool diameter (position 1; 3–10)	Max	260	mm
Tool diameter of saw (with holder A=50 mm) (position 2)	Max	350	mm
Tool/unit length	Max	295	mm

When using position 2 for a saw blade, positions 1 and 3 remain free, adjacent slots of units remain free.
The weight distribution of tools and units in the tool changer must be symmetrical.
When accessing the linear changer, restrictions in shuttle operation must be observed.
For more details, see the technical data sheets.

Contained in the package

- Future

P1.1.4.2.1.1 **Article no. 1697** **Quantity: 1**

Tool changer plate 14-part d=130

For tools and units with HSKF63

- Attached to the gantry

TLF technical data			
Number of slots		14	pcs
Distance of the slots		136	mm
Weight when fully equipped	Max	70	kg

Technical data for tools/units			
Diameter	Max	14x130	mm
Diameter	Max	260	mm
Tool/unit length	Max	295	mm
Weight of tools incl. holder	Max	6	kg
Unit weight	Max	10	kg

The weight of the tools and units in the tool changer must be distributed symmetrically.
For more details, see the technical data sheets.

Contained in the package

- Future

P1.1.4.2.2.1.1.1.1 **Article no. 0874** **Quantity: 1**

Drilling gear with 12 spindles: V12 (SW/32)

+ Quick-release system for all vertical drilling spindles to reduce setup time
+ All spindles can be called up individually for high flexibility
+ Mechanical feed lift locking device (spindle clamping) for reliable attainment of the drilling depth
+ Program-controlled adjustment of the drill speed for highest drilling quality
+ Pneumatic pre-load and retraction stroke for short drilling cycles
+ Standing drill spindle sleeve with internal bearing for long-lasting use

Technical data:			
Drive motor, frequency-controlled		2.3	kW

Speed, variable	Min	1500	1/min
	Max	7500	1/min

Vertical drill spindles:			
Number of		12	pcs
Advance stroke		60	mm
Spindle distance (grid)		32	mm
Drill diameter	Max	35	mm
Overall drill length	Max	70	mm
Drilling depth	Max	38	mm
Drilling depth with special drills and restrictions	Max	55	mm

For layout, travel paths and possible mounting units for the drilling gear, see technical data sheets
including extraction hood
without tools

Contained in the package

- Future

P1.1.4.2.2.1.1.2.1 **Article no. 0796** **Quantity: 1**

Drilling gear with 4 spindles: H4X

+ Weldon clamping system for all horizontal drilling spindles
+ All spindles can be called up individually for high flexibility

Horizontal drill spindles			
Number in X direction		4	pcs
Advance stroke		60	mm
Distance between spindles		32	mm
Drill diameter	Max	20	mm
Overall drill length	Max	70	mm
Drilling depth	Max	38	mm
Drilling height in Z direction, from the upper edge of workpiece	Max	38	mm

Technical data of the drive motor is described in the vertical drilling gear
For information on the layout, travel paths for the drilling gear, refer to technical data sheets
without tools

Contained in the package

- Future

P1.1.4.2.2.1.1.3.1 **Article no. 0798** **Quantity: 1**

Drilling gear with 2 spindles: H2Y

+ Weldon clamping system for all horizontal drilling spindles
+ All spindles can be called up individually for high flexibility

Horizontal drill spindles			
Number in Y direction		2	pcs
Advance stroke		60	mm
Distance between spindles		32	mm
Drill diameter	Max	20	mm
Overall drill length	Max	70	mm
Drilling depth	Max	38	mm
Drilling height in Z direction, from the	Max	38	mm

upper edge of workpiece				

Technical data of the drive motor is described in the vertical drilling gear
For information on the layout, travel paths for the drilling gear, refer to technical data sheets
without tools

Contained in the package

- Future

P1.1.4.2.2.1.1.4.1 **Article no. 1011** **Quantity: 1**

Groove saw, can be swiveled 0–90°

Number of		1	pcs
Orientation, rotating		0/90	°
Saw blade diameter	Max	125	mm
Cutting width	Max	5	mm
Cutting width with special tool	Max	8.5	mm
Cutting depth	Max	30	mm
Machining cross-section:	Max	70	mm²
Mounting flange, diameter		30	mm
Reference diameter		48	mm
Countersunk head screws, M5		4	pcs
Direction of rotation		Right	

Cutting width 8.5 mm with reduced cutting force design, for saw blade see technical data sheets/machine documentation
Without tools

Contained in the package

- Future

P1.1.4.2.2.2.1.1 **Article no. 1009** **Quantity: 1**

Processing spindle 12 kW Drive5CS

Cardanic five-axle head for trimming, drilling and sawing at any angle to the workpiece with an interface for HSK-F63

+ Three-phase asynchronous motor with current control
+ Active and closed cooling system with temperature monitoring to avoid thermal damage and increase service life

Technical data

HSK DIN 69893		{HSK-F63}	
Spindle power S6 (cyclic operation)		12	kW
Spindle output S1 (continuous operation)		9	kW
Speed		1500–24.000	1/min
Full rated power		12000	1/min
Weight of tool incl. chuck*	Max	6	kg
Length of tool incl. chuck*	Max	230	mm
Diameter of milling tool*	Max	180	mm
Saw blade diameter (tool chuck with A-dimension=50 mm)*	Max	350	mm
*different values on request			
Angle of rotation of C axis at A=0 degrees		+/- 361	°
Angle of rotation (C axis)		+/- 100	°
Block dimension of the spindle (spindle axis — motor housing)		63	mm
For additional information, see technical data			

Without tool chuck and tools
Where A does not equal 0 degrees, the angle in the C axis is reduced

Increased requirements in relation to process forces, surface quality or contour accuracy require a prior examination and production of limit samples. Materials and (where necessary) clamping devices, tools and programs must be provided for this purpose.

For interpolating 5-axis processing, the woodWOP CAM plug-in professional version (available as an option) or a suitable external CAD/CAM system is required

Contained in the package

- Future

P1.1.4.2.2.2.1.2 **Article no. 1013** **Quantity: 1**

Extraction hood 8-stage 5-axle

Room suction unit for 5-axle processing with 8-stage height adjustment

\+ Optimal hood position in relation to the workpiece for efficient chip collection

- The stage is controlled depending on the workpiece thickness, tools and position of the A axis or through specification
- The hood position is automatically adjusted to the workpiece thickness and controlled upward for swiveled processing with long tools, the suction effect is reduced accordingly

Due to the system, the cleaning of the suction device is reduced for different machining processes.
Full encapsulation of the machine is recommended for optimal retention of impurities.

P1.1.4.2.2.2.1.3 **Article no. 7403** **Quantity: 1**

Bracket for two Z axes

Bracket is designed for two separate Z-axes (Z1, Z2)

\+ Enables the rapid alternating use of the drilling gear and the main spindle

P1.1.4.3.1 **Article no. 6531** **Quantity: 1**

Tool length check

Suitable for measuring the lengths of shaft tools.

- After exchanging the tool via the equipping position, a length measurement is performed and compared with the tool database.

WORKPIECE FIXING AND POSITIONING

P1.1.6.1 **Article no. 1608** **Quantity: 1**

Basic structure of console table manual 1-circuit

Console clamping table for flexible and safe clamping of workpieces

Basic construction

- 1-circuit vacuum system
- Tubeless vacuum guide
- Using double bracket technology, any number of vacuum clamps can be positioned freely and are infinitely variable on the console
- Positioning of the consoles via dust-protected and high-quality guides.
- Table construction with large clearance below the consoles for the disposal of chips and offcuts

- The special positions are permanently assigned to the storage return lines:
- Working area and position of the stop pins according to technical data sheet
- Left front bumper
- Workpieces are placed on the front by hand

Extreme workpiece dimensions must be clamped with templates or mechanical workpiece clamps.

P1.1.6.2.1.1 **Article no. 0808** **Quantity: 2**

Support profile for X stop

- Aluminum profile with grooves for holding adjustable side stop pins
- Adjustment range according to technical data
- Without stopper bolts

The position on the console must be determined in accordance with the technical data.

Contained in the package

- Console table with LED

P1.1.6.2.1.2.1 **Article no. 0809** **Quantity: 4**

Stopper bolt for "covering layer" folding attachment

Stopper bolts with attachment, prepared for the manual assembly of a folding attachment for workpieces with covering layer overhang

- incl. electrical end position querying
- Without folding attachment

Contained in the package

- Console table with LED

P1.1.6.2.2.1 **Article no. 1234** **Quantity: 6**

Console Y=1360 mm for K table

Clamping console for manual console table with single-circuit vacuum system

Contained in the package

- Console table with LED

P1.1.6.2.2.2.1 **Article no. 0781** **Quantity: 6**

Front stop pins

Pneumatically lowering longitudinal stop including electr. end position query

Contained in the package

- Console table with LED

P1.1.6.2.2.3.1 **Article no. 0779** **Quantity: 6**

LED positioning system, Y direction

Visual LED display system for manually positioning consoles

- Programmed positions for consoles are visually displayed in an LED grid of 5 mm
- A positioning accuracy of +/- 2.5 mm can be achieved via intermediate spacings

Contained in the package

- Console table with LED

P1.1.6.2.2.4.1 **Article no. 0198** **Quantity: 4**

Pneumatically lowerable insertion aid

- The workpiece insertion aid is mounted on the side of the consoles

Contained in the package

- Console table with LED

P1.1.6.2.9.1.1 **Article no. 0780** **Quantity: 6**

Rear stop pins

Pneumatically lowering longitudinal stop including electr. end position query

Contained in the package

- Console table with LED

P1.1.6.2.11 **Article no. 0783** **Quantity: 1**

Two-part vacuum system for shuttle operation

Two-part vacuum system (field A/field B)

- Activation via two separate foot switches

P1.1.6.2.12 **Article no. 0789** **Quantity: 1**

Vacuum connection for templates

- 1 vacuum connection for templates for the right and left working field

Contained in the package

- Console table with LED

P1.1.6.2.13.1 **Article no. 0778** **Quantity: 1**

LED positioning system, X direction (3XXX mm)

Visual LED display system for manually positioning consoles

- Programmed positions for consoles are visually displayed in an LED grid of 5 mm
- A positioning accuracy of +/- 2.5 mm can be achieved via intermediate spacings

Contained in the package

- Console table with LED

P1.1.6.2.14 **Article no. 0458** **Quantity: 6**

Manual stop for surface overhang

- For covering layer overhang up to 20 mm
- Function achieved via folding hinges
- If the stop with covering layer overhang is used, the working area is reduced accordingly.

For AP table, can only be used with the rear stops.

P1.1.6.2.15 **Article no. 0864** **Quantity: 1**

Supply unit for pneumatic clamping elements, right and left work area

Supply unit for pneumatic clamping elements activated with the foot switches.

- 2-circuit pneumatic system for using powerClamp clamping elements
- The workpiece is held at low pressure when the clamping element is actuated and is only clamped at full pressure for machining after program release
- One central block each on the right and left halves of the table, each with 2 x 6 connections that can be activated together or in 2 rows in step chain.

Only for machines with 2-way vacuum separation in an X direction (standard).

FIXING WORKPIECE

P1.1.6.3.1 **Article no. 0192** **Quantity: 12**

Vacuum suction unit 115x160x100 mm K-table 1-circuit

Vacuum suction unit for 1-circuit console table system

- Replaceable rubber lining

Technical data:

Installation height		100	mm
Length		160	mm
Width		115	mm

Contained in the package

- Console table with LED

P1.1.6.3.2 **Article no. 0193** **Quantity: 6**

Vacuum suction unit 125x75x100 mm K-table 1-circuit

Vacuum suction unit for 1-circuit console table system

- Replaceable rubber lining

Technical data:

Installation height		100	mm
Length		75	mm
Width		125	mm

Contained in the package

- Console table with LED

ENERGY AND SUPPLY

P1.1.7.1 **Article no. 0733** **Quantity: 1**

Vacuum system 126/152 m³/h

Vacuum system with a total rated power of 126/152 m³/h.

- Low-wear and quiet rotary vane vacuum pump(s), oil-lubricated.
- If several pumps are used, the individual pumps can be switched on and off via a softkey for demand-oriented and sustainable use.

Vacuum system

Number of vacuum pumps		2	pcs

Technical data for each vacuum pump:

n at 50 Hz		63	m³/h
n at 60 Hz		76	m³/h
Motor rating		2	kW
Sound pressure level in dB(a)		64	

P1.1.7.2 **Article no. 6771** **Quantity: 1**

Energy-saving function:

ecoPlus button for starting stand-by operation; this can be activated during machining and takes effect on ending the program:

- Drive units are switched off so that they have no power
- Switch-off of vacuum pumps
- If the machine is not in production, standby operation is activated after a preset time
- When activating ecoPlus, a potential-free output is set that is able to activate the fence (on-site) of an external suction device

P1.1.7.3 **Article no. 6591** **Quantity: 1**

SCPS for PC

Uninterrupted power supply

CONTROL MACHINE

P1.1.8.1 **Article no. 0208** **Quantity: 1**

powerControl V2 with powerTouch

Hardware:

- Operating panel with 24" full HD multitouch display in widescreen format
- PLC control system according to the IEC 61131 international standard
- Modern industrial PC with Windows 10 operating system
- Backup manager and storage medium for comfortable data backup
- USB connection
- Digital drive technology
- Decentralized, digital fieldbus system
- Antivirus software

Software:

- Standardized HOMAG powerTouch user interface
- Ergonomic touch operation with gestures, e.g. zooming, scrolling, swiping
- Easy navigation for uniform, intuitive machine operation
- Intelligent production readiness display via traffic light function
- Graphic slot assignment
- Web control in all axes and parallel processes through multi-channel technology
- Look-ahead function for optimum speeds at the transitions
- Dynamic feed forward for the most accurate contour fidelity
- Graphical tool database:
  Software package to support the HOMAG units listed in the scope of delivery. Consisting of woodWOP machining macros, NC subprograms and management of unit data
- Import option of tool data from tool measuring stations
- Integrated production list for the processing of program lists

The machine control system is not suitable for processing personal data in accordance with the EU GDPR.

P1.1.8.2 **Article no. 6204** **Quantity: 1**

PC keyboard: English

P1.1.8.3 **Article no. 6499** **Quantity: 1**

Mobile operating terminal (10 m)

Freely positionable operator terminal with a distance of up to 10 m around the switch cabinet.

P1.1.8.4 **Article no. 6495** **Quantity: 1**

Control cabinet firmly mounted

- Control cabinet firmly screwed to the right side of the machine

P1.1.8.5 **Article no. 6491** **Quantity: 1**

tapio ready

A feature that gives you the option to use innovative digital products from tapio and tapio partners for future-proof operation

- Your HOMAG machine is already prepared for connection to tapio at the time of purchase
- Contact your local HOMAG Sales office or visit www.tapio.one
- The machine is delivered as "tapio ready"
- The additional effect of the "tapio ready" functionality is that when you switch the machine on, a connection to the tapio exchange service is established so that the machine number can be used to check whether the machine has been activated and authorized for use via the tapio platform

Please note that some offers and services on tapio can only be used once you have registered for them, registered the machine or connect to it and activate services for it. For more information, please visit: store.tapio.one or contact your HOMAG sales team

P1.1.8.6 **Article no. 6067** **Quantity: 1**

Ethernet CNC network connection

Within the machine or plant, HOMAG uses data networks with 192.2.X.X or 192.168.1.X addresses.

If the customer network also uses this address, the customer must provide a router to avoid network conflicts.

P1.1.8.7 **Article no. 6340** **Quantity: 1**

Wired manual operation for run-in mode

+ Integrated hook for flexible mounting
+ According to IP65

The following drill sequences can be selected:

- Run-in mode
- Start start/stop
- Emergency stop switch with protective collar

P1.1.8.8 **Article no. 1233** **Quantity: 1**

Operation comfort pack

3 additional buttons in the enclosure offer the following functions:

+ Start program
+ Running until free
+ Pausing program
+ Raising extraction hood

- Additional laser scanner for monitoring the work area on the operator side moves forward together with the machine on the front of the safety enclosure.
- If the laser scanner detects persons in the movement range of the machine, the machine stops before contact with the bumpers.
- Function can be deactivated via softkey on the operating terminal for interruption-free machining with significant chip flight

P1.1.9.1.1	Article no. 6672	Quantity: 1

woodWOP for machine

woodWOP for graphic, dialog-oriented creation of CNC programs

- Large program library with example programs for contours, cabinet furniture, worktops, doors
- Free download at: www.homag.com
- Includes CAD plug-in for creating CAD contours and for importing existing CAD drawings in DXF format

P1.1.9.1.2	Article no. 6061	Quantity: 1

woodWOP DXF-Import basic (single-user license)

Interface for transferring drawing data from CAD systems in DXF format.

- By using certain layer names, edits can be automatically created from the DXF drawing.

The license for DXF Import Basic is included in the woodWOP license.

P1.1.9.1.3	Article no. 6004	Quantity: 1

3D CNC simulator machine (single-user license)

Graphical simulation of the CNC program in 3D and time calculation

- Display and check the positions of the clamping elements
- Collisions between the tools and the workpiece or clamping equipment are identified.
- Display of material removal and residual parts (e.g. cut-outs for glass panes)
- Display of errors during program generation, e.g.
  missing tools, invalid travel paths
- Multiple selection of programs for batch simulation
- Time calculation with an accuracy of +/- 10%
  When processing with the CAM plugin, larger deviations can result

Exclusion of warranty:
The simulation result may differ from the situation in reality. We therefore offer no warranty for collisions involving the real machine.
It is not possible to guarantee that graphical data is entirely complete and correct.