FerWood®
BRILLIANT SOLUTIONS FOR WOOD

HOMAG CNC Gantry-Processing Center
CENTATEQ T-700

CENTATEQ T-700 (PROFI BOF712/32/18/A)

HOMAG CNC PROCESSING CENTRE

CNC-controlled processing centre in gantry construction, for trimming and drilling panels of wood or similar materials,

Prepared for 2 main spindles for synchronous processing or for the independent processing of 2 panels (Independent Axis). Main spindles mounted on the front side of the gantry traverse.

BASIC MACHINE:

- stable steel frame construction in gantry execution
- lacquering of the machine and safety fence posts in RAL 9003 signal white design strips, safety fence fields,
- safety doors and stela in RAL 7021 dark grey linear guiding systems with dust protection rack and pinion drives for X and Y axis recirculating ball screws for Z-axis maintenance-free drives with digital AC servo motors for exact contours
- 2 unit beams single-sided mounted on the front side of the gantry traverse unit beam with variable distance, two axes (independent axes).
- synchronous distance of the unit beams depends on the equipment: Min. 750 mm, 900 mm or 1500 mm (possible position of the stop pins see techn. data sheet)
- each unit beam is prepared for two separate z-axes (Z1,Z2). Enables rapid and alternate use of the drill head and main spindle travelling speeds:
  - vector speed 100 m/min
  - X-axis 80 m/min
  - Y-axis 60 m/min
  - Z-axis 30 m/min
- central extraction tube for each unit support for boring head and processing spindle
- the suction hood can be adjusted in height at 4 levels
- central lubrication automatic for a complete and low-maintenance lubrication of all drives and linear guidance (X, Y and Z axes)
- compressed air supply min. 7 bar connecting load for suction, pneumatic, compressed air and electricity are to be taken from the separate installation plan floor conditions must correspond to the foundation plan
- panels with high demands in respect of exact- itude or surface quality must -due to the system- be processed with the same spindle (the spindles are not used alternately)

PANEL PARAMETERS:

- Panel lengths max:

- -T " A 1 1 units
- 700 : individ. : pendulum : 4-fold (synchr.)
- 32 3200 mm 2040 mm : 880 mm panel width max:
- T- all : trimming works
  700 units : tool diam. 25 mm
- .. /18 1850 mm 2075 mm
- panel thickness:
  - max. 300 mm incl. clamping means (in case of a max. unit length of 270 mm and ride- along tool changer)
  - up to max. 60 mm with standard clamping means without any restriction for units and suction
- production of 'over-width' panels is possible the clamping table moves with reduced feed (max. 25 m/min) in the safety zone of the operator
- the panel exceeds the table rear edge processing and clamping of the max. panel sizes accord. to techn. data sheet
- the indicated panel dimensions are not to be equated with the max. possible processing sizes per unit, see separate tables
- the min. panel size depends on: clamping devices, panel surface and contour
- the machine operator is responsible for the use of suitable materials (boards, glues, edging materials, cleaning means, lacquers etc.)

MACHINE EQUIPMENT

CLAMPING TABLE:

- CONSOLE TABLE: A
- Clamping table with automatic positioning of the consoles and vacuum clamps,
- T- consoles incl. : lift-off rails
- 700 stop in front
- 32+42: 8 pcs. (4/table): 8 pcs. (4/table)
- stop pins selectable in groups,
- stroke from console surface lifting rails sliding, in plastic execution lifting power automatically positionable platforms per console positioning accuracy approx.
- lateral stops:
- T-700 Table 1 (place 1+2) Table 2 (place 3+4 and mirror position)
- 32+42: 4 pcs. 6 Pcs
- T- vacuum clamp vacuum clamp
- 700 160x115x100 mm 125x75x100 mm
- 32+42: 16 pcs. 8 pcs
- pneumatic connections for clamping elements:
- 2 per processing place
- 2 displaceable console tables
- 2 vacuum circuits per table
- for charging and unloading, the table moves forward out of the processing area of the machine
- working height from lower edge of panel: 1020 mm

- linear guidance for exact and torsion- resistant adjustment of the clamping consoles table construction with a lot of non- obstructed space below the consoles for removal of chips and residual pieces
- control of the final position of the stops
- in order to omit collisions during processing vacuum clamps 100 mm high, enable also processing of the panel lower side
- pendulum processing for increasing productivity
- working zone and position of the stop pins accord. to technical data sheet
- extreme panel dimensions are to be clamped with templates or with mechanical panel clamping means
- machine zero point is on the left side in front
- panels are put on manually from the front side
- when processing strongly resinous timber, increased cleaning expenditure is required pushing system on the table front and rear side in order to automatically push-off chips and waste material until the rear side of the processing tables
- removal of bigger residual pieces takes place manually or by means of a chip transport belt
- (optional)
- during courses of motion of the A-table
- the operating staff has to maintain a safety distance of at least 800 mm. This will be ensured by additional safety installations.

ADDITIONAL MACHNE EQUIPMENT
- see option list

POWERCONTROL PC86 POWERTOUCH:
- Modern control system based on a Windows PC

Hardware:
- operating panel with 24" FULL-HD multitouch
- display in widescreen format

- PLC control accord. to International Standard IEC 61131
- modern industrial PC with operating system
- Windows 10
- backup manager and storage medium for com- fortable data backup
- USB connection
- hand operation for run-in mode
- digital drive technology decentralized, digital field bus system virus protection software
- network connection ETHERNET via additional card and network software. Within the machine or machine line Homag uses data networks with the identification 192,2.x.x or 192.168.1.x. If the address range is also used in the customer network, a special project planning has to be effected and, if necessary, an additional hardware has to be used by the customer
- UPS (uninterruptible power supply), protects the computer from damages in case of mains interruption, overload and short circuit.
- with the purchase of your HOMAG machine, the machine is already prepared to be connected with tapio (connecten)

- this functionality gives you the opportunity to use tapio's innovative digital products and of tapio partners to be ready for the future
- inform yourself also at your HOMAG Sales or under www.tapio.one

Software:
- equal HOMAG user interface powerTouch ergonomic touch operation with gestures such as zooming, scrolling and swiping
- easy navigation for equal and intuitive operation of the machine
- intelligent display of readiness of product- ion by light function
- control for continuous line operation in all axes and parallel operations through multiple-channel technology
- look-ahead function for optimum speeds at the transition points
- dynamic look-ahead-control for accurate contours
- graphic tool data base: Software kit for assistance of the Homag units listed in the scope of delivery. Consisting of woodWOP processing macros) NC sub programs and administration of unit data
- possibility to import tool data from tool measuring stations
- production list administration CNC operation
- graphic place occupation error message in plain text
- MMR basic for maintenance based on usage and for the representation of important production figures (e.g. number of pieces) production time)
- expandable to MMR professional for optimization of production by capturing and evaluation of the downtimes of the
- machine as well as the reasons for disturbances
- woodWOP for graphic and interactive creation of CNC-programs. Great program library with example programs for contours) corpus furniture, worktops) doors: free download under www.homag.com
- inclusive CAD-Plugin for creating CAD con- tours and for the import of existing CAD drawings in DXF format

intelliServiceNet:
- The new innovative TeleService connection: remote diagnosis via internet for a quick) low-cost and reliable remote service
- invoicing according to separate teleservice contract
- access to the internet is to be provided by the customer (Port 443 HTTPS)
- access to 1 machine PC is possible (PowerTouch with Windows 7 or Windows 10) registration of the machine as well as activation of the function "intelliServiceNet" required under www.tapio,one
- in order to obtain the full function range, the machine has to be "tapio connected".

- The control of the machine is not suitable to process personal data within the meaning of EU-DSGVO.

ELECTRIC EQUIPMENT:
- operating voltage 400 volt, 50/60 Hz separate switch cabinet for a positioning on the right or left side in
- front of the processing table (standard is on the right)
- operation terminal integrated in the switch cabinet

- installed accord. to European Standard
- EN 60204-1
- country-specific adaptation of operating voltage by transformer
- incl. potential-free contact for controlling a suction flap to be provided by the customer The machines are not suitable for connection to a RCD due to operational leakage currents. Instead the recommendation is to route the supply in such a way as to prevent ground faults or short circuits (e.g. in accordance with DIN VOE 0100-520/521.11)
- prescribed environmental temperature:
- + 5 degrees up to+ 40° C
- (in case of environmental temperature >35°C or air humidity >65% a cooling unit for switch cabinet is recommended)

SAFETY AND PROTECTION FACILITIES:

- safety surveillance of the operating area for an effective protection of the operating staff, without any restriction of the travelling speeds
- safety barrier at the machine side right with safety door
- additional safety barrier machine side left
- and back side required acc. to option list. These required additional safety barriers can be omitted if the safety measures at the site of installation are observed.
- If the customer explicitly desires that the machine is delivered and installed without safety barriers, the customer is obliged to guarantee the safety at the corresponding machine sides by
- proper safety measures. This also applies for later modifications, especially in case of later modifications at the site of installation, in case of installation of the machine at another site or in case of resale of the machine
- ATTENTION: the machine must not run without
- full safety barriers
- the customer waives guarantee and damage compensation rights concerning the fact that the machine was delivered and installed without full safety barriers. The customer is obliged to indemnify the deliverer against any claims of third parties which might be raised due to this circumstances
- EC conformity (CE) according to the currently
- valid Machinery Directive for individual machines in operation
- according to the Machinery Directive an additional EC conformity certificate for linked machine operation (cells/plants) is required in the defined countries. List of countries and execution according to sales no. 8945 wood dust protection TRK-value max. 2 mg/m3, subject to the fact that the suction
- capacity to be provided by the customer is in compliance with the suction plan
- condition for our warranty/product liability is the unrestricted observance of the original production instructions delivered along with the machine including the safety instructions

HOMAG QUALITY PACK:

- energy guiding chains (cable trail) in V and
- Z direction in closed execution in order to prevent cable damages caused by residual pieces, chips and so on
- TOV certificate accord. to DIN EN ISO 9001:2015

- energy-efficient drives accord. to the EU no, 640/2009
- energy-efficient suction hood
- the machine is run-in and delivered with HOMAG standard program
- energy saving functions:
- ECO Plus button for start of the stand-by mode, which can be activated during the last operation. After program end the but- ton provokes the following:
- the drives stop running
- - the vacuum pumps are switched off
- when the machine is not producing, the control voltage is disconnected by means of preset time
- when no panel is clamped, the vacuum pump is disconnected by means of preset time flap control for reduction of the necessary suction energy by automatic switching over between boring head and main spindle

BASIC EQUIPMENT OPERATING MANUALS:

- language as indicated under position D.01
  - operating manuals consisting of operating and maintenance manuals on a DIN A4 paper and data carrier
  - spare parts denominations on data carrier 3, wiring diagram on data carrier in German and English
  - help texts are integrated into the machine control
  - operating system dialogues in English

Modification

- Execution of suction hood: same as on already delivered machine.
- Switch cabinet positioned on the left.
- Drill head assembly and arrangement same as on 0-201-69-0536
- stop pin situation same as on
- 0-201-69-0536

INSTALLATION ACCORDING TO UL SPECIFICATIONS

- switch cabinet executed according to UL specifications

PROCESSING SPINDLE 15 KW x 2

- with interface for HSK F63 - DIN 69893
- for precise chuck of tools and units for high processing forces
- three-phase asynchronous motor for high torque even for low revolutions
- liquid cooling with temperature control to avoid thermal damages and to increase the operating life.
- Cooling unit with closed coolant feed spindle with hybrid bearing for highest precision and long service life in case of high numbers of revolutions
- 15 kW for S6 operation (cyclical power output in practical operation)
- 12 kW for S1 operation (permanent operation)
- frequency convertor for electronic regulation of the number of revolutions from 0 - 24000 rpm
- total nominal power from 9500 rpm tool weight max. 6 kg incl. chuck
- tool length max. 200 mm from lower edge of motor spindle
- tool diameter:
- max. 180 mm for trimming tools max. 200 mm for sanding tools incl. Z-axis module

- vibration sensor for surveillance of the spindle during processing records vibrations which arise through tool imbalance or improper use when the threshold value is exceeded, e.g. sudden overload, the machine stops and an error message occurs
- automatic feed reduction when the spindle speed falls
- without tool chuck and tooling

PLATE-TYPE TOOL CHANGER 10 TOOLS 0=120 x 2

- for tools and units with HSKF63
- plate-type tool changer for 10 tool places/ unit places, ride-along with the main spindle tool weight max. 6 kg incl. chuck
- for units max. 10 kg
- the following tool and unit equipment are possible:
- 10 x diameter max. 120mm or
- 5 x diameter max. 180mm and
- 5 x diameter max. 70mm
- tool diameter max. 190 mm
- unit length max. 270 mm
- weight of equipment max. 30 kg
- the weight distribution of tools and units
- in the plate-type tool changer must be effected symmetrically
- when equipped with units, restrictions occur on the adjacent places

DRILL BLOCK 31 SPINDELS: V21/H10/S0-90° x 2

- 1 motor 2,2 kW, frequency-controlled number of revolutions up to 7500 rpm selectable by program for quick processing also in case of small diameters

- 21 VERTICAL SPINDLES HIGH-SPEED:
- every drilling spindle with quick change system for reduction of set-up times each drill spindle can be called up individually
- spindle retraction stroke 60 mm
- drill spindles locked in the retraction stroke in order to achieve the drilling depth in any case
- arrangement of the spindles see techn. data
- spindle distance 32 mm
- drill diameter max. 35 mm
- total length of drill 70 mm
- shaft diameter 10 mm
- with clamping surface and adjusting screw direction of rotation: left/right-hand rotation alternately

- 10 HORIZONTAL SPINDLES WITH SAW, 0/90°:
- spindles 0/90° swivelling
- arrangement of the spindles see techn. data
- drill diameter max. 10 mm
- drill chuck d=10 mm
- total length of drill: 70 mm
- with clamping surface and drill depth max. direction of rotation: saw blade diameter
- saw blade width cutting depth
- inclusive z-axis module inclusive suction hood without tools
- adjusting screw

- 38 mm right/left
- 125 mm
- max. 5 mm
- max. 28 mm
- 1 free space for add-on trimming spindle Only possible with B700 machines and 4-axis spindle

ADD. PLATFORM FOR VACUUM CLAMPS A-TABLE x 8
- 1 platform with vacuum supply for mounting a vacuum clamp
- 1 vacuum clamp approx. 160 x 115, 100 mm high, with tracer valve
- Max, 4 platforms per console

LATERAL AND LONGITUDINAL STOP PINS 140 MM x 14
- control of final position, with electro- mechanic control, stroke 140 mm from table surface
- stop pins selectable in groups
- the position on the clamping table has to be stipulated according to Technical Data
- Modification
- 6 stop pins for additional aluminum profiles
- 8 stop pins as third stop per aluminum profile

CARRIER PROFILE FOR X-STOP x 3
- Aluminium profile with grooves for mounting of adjustable lateral stop pins.
- Adjusting range see Technical Data. Without stop pins.

EXTENSION OF TABLE TRAVEL
- To process max. part size of 1975x458 mm with all units.

LATERAL AND LONGITUDINAL STOP PINS 140 MM x 8
- control of final position, with electro- mechanic control, stroke 140 mm from table surface
- stop pins selectable in groups
- the position on the clamping table has to be stipulated according to Technical Data

Modification
- 8 stop pins for the rear stop row

VACCUM CLAMP 160 X 115 MM FOR A-TABLE x 16
- vacuum clamps with double sealing lip for stepless positioning on the console rubber coating can be changed in case of waste
- with tracing valve clamp height 100 mm

VACCUM CLAMP 125X75 MM FOR A-TABLE x 8
- vacuum clamps with double sealing lip for stepless positioning on the console rubber coating _can be changed in case of waste
- with tracing valve clamp height 100 mm

ENERGY AND SUPPLY

VACUUM SYSTEM 580/690 M'/H

- 50 Hz 580 m3/h
- 60 Hz= 690 m3/h
- Consisting of:
- 2 piece vacuum pump with a nominal power of 290 m3/h
- low-wear and energy efficient vacuum
- pump with claw technology from type Busch each vacuum pump can be individually connected by a softkey

COOLING UNIT FOR SWITCH CABINET
- the cooling unit is recommended if the environmental temperature exceeds 35°C or air humidity is more than 65 %

TRANSFORMER FOR VOLTAGE ADAPTATION CNC
- mains voltage 200 - 600 Volt
- installed in the switch cabinet

Modification
- operating voltage 480 volts/ 60 cycles

CONTROL MACHINE

PC KEYBOARD: ENGLISH

DIAGNOSIS SYSTEM WOODSCOUT
- Software kit for the graphical diagnosis of the machine condition. With the woodScout system it is possible to systematically eliminate troubles1 which leads to a considerable increase of the plant availability.
- graphical PLC diagnosis in different levels learning system due to the possibility of entering the reasons for disturbances and the measures to eliminate them
- optimum support for the elimination of machine down-times

SOFTWARE SYSTEM REQUIREMENTS AND NOTES
System requirements for PC of the customer
- operating system: Windows 7, 8, 10 For PC87: 64-Bit-system required processor: at least Dual Core (recommended Quad Core)
- main storage: at least 2 GB RAM
- graphic card: with at least 1 GB memory and OpenGL 3.3 support
- when using Intel Onboard graphic cards at least GMA X4500, better Intel HD graphic

Notes regarding software licences:
- the HOMAG software is licence protected
- on a machine PC only single-seat licences are running
- on an office PC all software products are protected by single-seat licences or floating licences (network licences) single-seat licences are bound to a PC
- with a floating licence the software can be used at several workplaces.
- Multiple users can use the software simultaneously as long as enough single-seat licenses are available. All workplaces must be integrated into the customer's network the installation of single-seat licences

- and floating licences of different products is possible as long as the PC itself is not configured as a server for floating licences

Notes for the installation
- the installation of the software respect. the integration of the machine into the customer network is effected by the customer himself or as an option with the support of our soft- ware support (with costs)
- when using floating licences the licence administration (licence server) is installed on a PC or server in the customer network.
- The licence server also can be installed on a terminal server
- the installation of the software on a terminal server is not supported
- if the licence server is installed on a virtual server or if the software shall work in a virtual environment) floating licences are required
- the product must be activated after the installation. Activation under https://eparts.homag.de

PROTECTION OF THE OPERATOR

SAFETY BARRIER LEFT-HAND
- Supports with safety barrier dowelled onto the floor
- Incl. 1 U-PVC window as sight element

SAFETY BARRIER BACK WALL /30-42
- Supports with safety barrier dowelled onto the floor
- Incl. 2 U-PVC windows as sight element

WASTE REMOVAL

CHIP CONVEYOR BELT CENTATEQ T/E-600/700
- Chip conveyor for automatic removal of chips and waste material
- Manual removal of big waste material Additional chip guiding sheets along the transport belt lead the chips and residual pieces safely onto the belt. Thus an accumulation of chips and residual pieces below the transport belt is prevented and damages of the belt material and the drive are avoided.

- Suction hood or ascending conveyor at the end of the belt to be provided by the customer For B600: Arrangement depends on the application, see layout. Chip conveyor transport direction to the left hand side For B700: Chip conveyor behind the processing tables. Transport direction to the right hand side until the outer edge of the machine bed

Modification
- Conveying direction to the left.

ASCENDING CONVEYOR 1300 MM
- For the transport of remaining pieces from the chip conveyor belt at the machine in a container to be provided by the customer

- Arrangement in through-feed direction
  Conveyor width

for P-300 and P-xxx/12	l' 500 mm
for P-310, P-xxx/15-19	- \ 850 mm
and T/E-600/700	
Conveyor length approx.	- l' 2600 mm
Lifting height max.	1300mm
Pitch angle Lifting speed	12 m/min

- Ribbed belt consisting of multilayer PVC with polyester material
- Deflection roller with clamping device

DOCUMENT

LANGUAGE SELECTION: ENGLISH

- operating manuals and on-screen operator control texts for machine operators in English