

WBS 120 with router, WMP 200 series and WEK 100 from WEINMANN

Timber processing in all Dimensions

Barely larger than a work table the WEINMANN WEK 100 for automatic processing of wall and gable elements. For larger dimensions is the WMP 200 series suitable. Here are complex forms and highly precise processes performed. The newly developed routing system for the WBS 120 as an efficient additional option for customers who occasionally require routing and drilling processes. At this years Ligna WEINMANN will showcase its complete range of timber processing machines and will once again show the flexibility WEINMANN has become known for.

More advantages for the customer: WBS 120 with router

The newly developed routing system for the WBS 120 represents excellent value for money, the WBS 120 has now been expanded with an optional router in the center of the saw blade. The new tool also allows routing work such as mortise and tenon joints, drilling or the processing of TJI supports to be carried out. With the new Flex 25 head, the fifth axis can be fully utilised, meaning that procedures such as routing is possible. The low router rotation speed of the WBS 120 does however mean that it is only suitable for low-grade work that is destined for non-visible areas. The machine is therefore not a replacement for a beam processing center, but does represent a logical development for customers who occasionally need routing or drilling, perhaps for prefabricated timber joints.

New market-focused solutions for timber construction specialists

Compact and effective: WEK 100

In response to customer demand, WEINMANN Holzsystembau GmbH is introducing a smaller version of the WEK 120 just in time for Ligna 2011. The WEK 100 will be only slightly larger than a work table, whilst maintaining the same function as the WEK 120: the automatic finishing of wall and gable elements with just a single employee at the machine. The slightly reduced output rate in comparison with the WEK 120 is compensated for by the lower procurement costs and the smaller space requirement of the machine.

Companies with very low volumes can carry out all panelisation steps on the WEK 100 and turn the elements after one-sided planking using an overhead crane. For larger companies, the WEK is the perfect addition to an existing production line with insert table, butterfly turning table and multifunction bridge. In this situation it would be possible to replace the insert table with the WEK 100 and therefore implement fully automated production for closed elements at a low investment cost. In addition, many more variations are possible, such as the combination of a WEK 100 with butterfly turning tables. In this scenario, insulation can be carried out on the receiver table and the second planking on the WEK 100.

The WEK 100 table consists of two roller conveyors that the operator stands between. After putting the bottom and top plates in place on the roller conveyors, the multifunction bridge, which is combined with a stopper and nailing system and mounted on the table, travels (controlled by CNC) to the position of the rearmost beam and creates a stop using extendable stop bolts. When the operator has inserted the beam, the machine will press and nail the construction together. This means, all the beams are processed in sequence and the operator moves backwards in the machine. Finally, the planking is put into position and clamped by the multifunction bridge. Up to ten tiers per side are possible and the machine can process element thicknesses up to 350 mm. The maximum element height is 380 cm and the length can be up to 6, 8, 10 or 12 m, depending on the variation.

Fitting windows or producing gables is easy to do with the WEK 100. Although the number of processing units on the machine has had to be limited to three plus inkjet due to space limitations, this makes it possible to, for example, combine a router or a saw with two clamping devices.

Since the operator stands in the working area of the machine throughout processing, it was necessary to develop a new safety system for the WEK 100. Prototype laser scanners, prepared for Ligna, were put to use to replace the light barriers previously used. Instead of a safety area around the whole machine, this system allows for the targeted location of people or objects in the processing area, which first reduces the speed of the machine and then, if the person or object moves any closer, the machine ceases working immediately.

Processing solid wood elements without a CAD system connection

WMP 200 production series machines can now process geometries without a connection to a CAD system. This is how the pre-production of a spiral staircase or the individual parts for a replica historical coppersmiths was possible: the data for the water wheel, shaft, gears and parts of the bellows was programmed in the HOMAG woodWOP software and then milled from solid oak.

The program interface displays the workpiece in 3D; routing, drilling or cutting are quick and easy to program and modify by entering the processing parameters. In addition, the fifth axis can also be set as the adjusting axis for the most common processes. Workpieces drawn in DXF format can be imported into woodWOP and transferred to the machine.

To work efficiently with the interpolating 5-axis processing, the WMP can of course still be connected to a suitable CAD-CAM system with a post-processor in the same way as before. WMP 200 production series machines, are specially developed for processing level solid wood elements, and is ideal for producing complex shapes, even with large dimensions. Running above the stationary inserted material on a high-precision rail system, the improved unit guides with toothed rack drive help to obtain the necessary stability. This makes it possible to achieve a longer tool life whilst maintaining the same high level of processing precision.

Elements of any length

The basis of the WMP 200 production series is a stable steel profile construction. It includes unit supports that can be fitted with various units. Depending on the expansion stage, the machine can drill, rout, saw, and/or perform a wide range of other processes. In doing so, it processes the workpieces not only from above, but also from the front faces. Thanks to a travel path with an optional length and a maximum element width of 4.00 m, processing solid wood walls or laminated wooden beams is no problem. The maximum element thickness that can be processed is 35 cm.

WEINMANN offers stationary work tables in multiple variations suitable for this production series: the entry-level model is a simple set-down table with stoppers, but no clamping mechanism. Variation 2 is equipped with movable brackets, vacuum suction units or screw units, which can be used to clamp problematic components during processing. Variation 3 is a butterfly turning table for components that are processed on both sides.

Various equipment options

The entry-level model in the production series, the WMP 200 Processing Center, reaches a sawing depth of up to 350 mm with its sawing unit, which can be swiveled through 90 degrees (A axis) and turned through 360 degrees (C axis). The WMP 220 offers greater flexibility with a 5-axis main spindle and 18 slot tool changer. The sawing depth is limited to 160 mm with a saw blade on the main spindle. The top of the range model in this production

series, the WMP 240, combines a sawing unit and 5-axis main spindle.

WMP 220 and 240 can be used for fully fledged interpolating 5-axis processing. The main spindle is equipped with various tools (e.g. drills, cutters, sanding tools) using the 18 slot tool changer. The highlight among the tools is a corner trimmer. After the end-milling router has routed a section from the component, the round corners can be trimmed square with this tool. This is a distinct advantage when installing windows and doors, especially for high-grade elements for visible areas.

A five-part chainsaw unit with 400 mm cutting depth for the mitre cut or covered slots is also available. a label printer and a scribing pen are also included in the available options, labelling, marking and scribing workpieces is not a problem. The tool changer reduces the setup times to a minimum and makes the machine flexible and prepared for the future, as it is ready for the use of further, newly developed tools.

All-round safety

The pollution of the working environment with dust, chips, and flying parts is minimised, in addition to the saw protection, by the machine being fully enclosed, which at the same time ensures the safety of the operating personnel. Other new safety mechanisms include scanners that scan the operating areas in front of and behind the machine.

The Ligna Edition WTZ 110/10 LE

WEINMANN Holzbausystemtechnik GmbH will also present the work table WTZ 110/10 LE at Ligna assembly table for the manual fabrication of highly accurate frame work and angled elements. The flexible and robust WTZ 110/10LE enables time and cost saving and will satisfy your customers needs. The WTZ 110/10 LE allows the production of wall, ceiling, floor, roof, gable and special elements. Expandable with a Multifunction bridge and upgradable to a larger production line. The durable and low maintenance WTZ 110/10 LE enables high quality finished products due to the accurate X and Y stops.



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