

Finish processing directly at the CNC

When components machined on a CNC required additional sanding, the task was normally completed using an abrasive sanding sleeve

This naturally led to a compromise in terms of surface quality of the finished component and severely limited service life of the abrasive material. BENZ, HOMAG and WEEKE now unveil two new units for surfacing and finishing directly on the CNC.

Using the two units – a belt sanding and an eccentric sanding unit – workpieces can be finished completely on the CNC. One unit sands the edges while the other is designed for use on a 5-axis machine to finish shaped surfaces.

The belt sanding unit – optimum edge sanding

Standard 100 mm wide sanding belts can be used on the belt sanding unit and replaced quickly without the need to take the unit apart. Integrated cleaning nozzles keep the belt permanently clean during use. The “wood**WOP**” programming system installed on the machine allows continuous adjustment of the Z axis, and so ensures oscillation of the sanding belt. This creates a sanded finish that is totally free of sanding marks, and in addition extends the service life of belts, thereby driving down running costs.



Bernhard Steinbacher, Meier Schreinerei AG in Weinfeld:

“The great thing about this belt sanding unit is its enormous scope, which lends it such a varied number of uses. We are extremely pleased with the quality: Compared to manual sanding or the edge belt sanding machine, we are able to achieve a far more consistent and high standard of quality – even when working with end grain or soft wood, where it is easy for the softer annual rings to be sanded out.”

Eccentric sander – pure genius

The functional principle used by the eccentric sander is highly effective. Because it is mounted in eccentric bearings, when the sanding plate comes to rest on the workpiece it changes over from a rotary to an eccentric movement, which keeps it neutrally balanced at all times. The unit can be used without a torque support in the same way as a normal tool. The process is programmed in the same way as a trimming operation with the face side of the tool.

The applications possible with the sander on a 5-axis machine are wide ranging, from leveling shaped components through to finish sanding chamfers and edges. The perforated abrasive and boreholes in the sanding plate permit sanding dust to be extracted while sanding is in progress. This not only guarantees optimum self cleaning but also reduces the risk of sanding mark formation, as illustrated by an example taken from practice: A chamfer trimmed onto an edge which has been banded on an HPL-coated counter top needs to be finish sanded prior to lacquering. In contrast to results obtained using the sanding sleeve tested in parallel, there are no visible sanding marks whatsoever when using the sanding plate.

The standard commercially available sanding plates and disks are also used with power tools and have been tried and tested for this type of application. Both units are also available with interfaces to CNC processing centers widely available on the market.



Andreas Weinzierl, 3D Holzdesign, Traunstein

“I was really surprised by the eccentric sander, which produced results far beyond my expectations. For me, this unit represents an enormous labour saving when processing shaped components: Instead of manually leveling the workpiece after trimming, the machine now runs for a slightly longer time but completely finishes the job.”

Drilling, trimming, sawing – CNC processing does not stop here. Quite the opposite: the new sanding units open up all kinds of new possibilities.

Incidentally: All the units are also available complete with different interfaces to CNC processing centers widely available on market.

Pictures courtesy of: HOMAG Group AG



Fig. 1: Leveling trimming marks left on a shaped MDF component

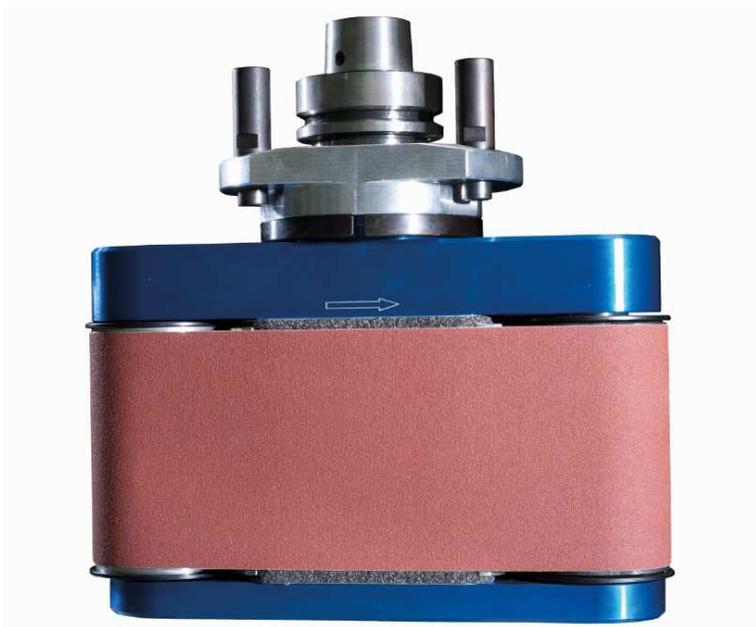


Fig. 2: Belt sanding unit



Fig. 3: Finish sanding edges using the belt sanding unit



Fig 4: Eccentric sanding unit



Fig. 5a: Finish sanding a chamfer on a table top



Fig. 5b: Detail view of a table top chamfer with banded edge and HPL surface layer

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