



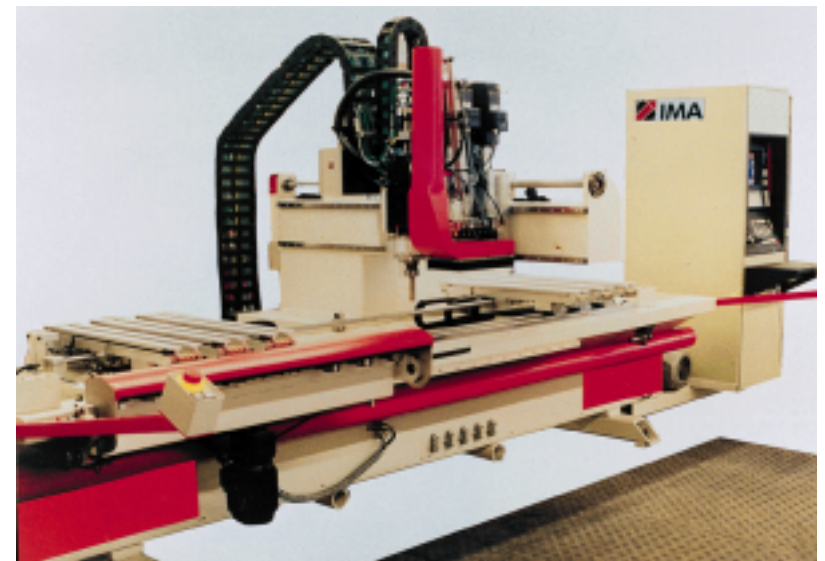
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## CNC-machines in wood processing

**BIMA-machining center - 3  
NC-axes, tool changer and  
console table - for a complete  
processing of workpieces**

**Photo IMA AG**

In the course of the last forty years - in 1957 the U.S. Air Force installed the first NC-milling machine in their workshops - a multitude of CNC-machines has been developed for the craft trades and industry. The most common CNC-machines in the field of furniture construction and interior fitting are CNC- machining centers, CNC-machines with more than 3 axes and CNC-panel saws. The following text primarily deals with CNC-machining centers.





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## CNC-machines in wood processing

CNC-machining centers have developed from CNC-drill centers and CNC-routers. They combine drill, saw and router units and allow to completely machine a workpiece on its topside and edges. At least 3 mobile NC-axes are standard today for CNC-machining centers. According to the construction of the machines, we distinguish:

CNC-training machine -  
3 NC-axes - put to use  
Photo MBA GmbH

- moving table machines, where the X and Y-movements are executed by the machine table, and the Z-movements by the tools,
- fixed table machines, where the X, Y and Z-movements are executed by the tools, while the machine table can be turned and swung due to additional axes,
- gantry machines with fixed or mobile bridges.

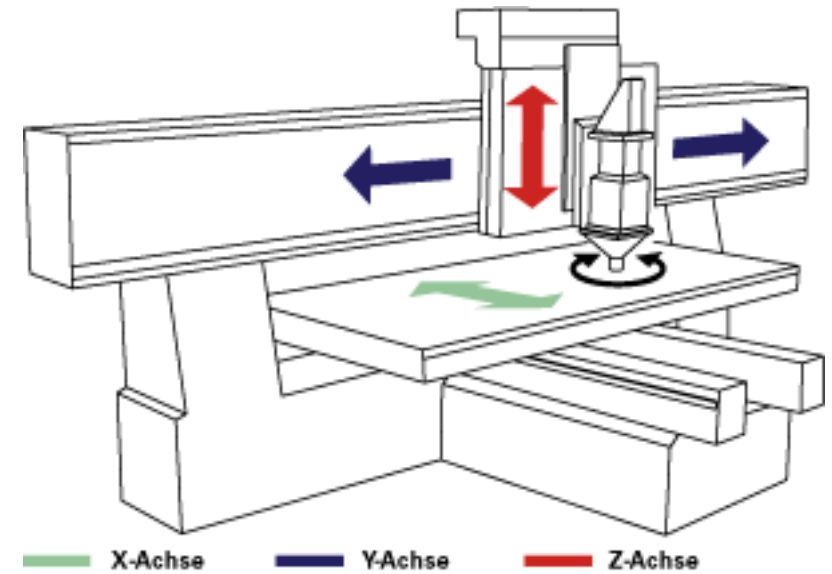




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## CNC-machines in wood processing

Tool changer and clamping devices are further components of CNC-machining centers. Due to their 3 NC-axes and a limited Z-axis lift, CNC-machining centers are primarily suited for processing flat workpieces. Depending on the use, the range offered by manufacturers starts with simple training machines and CNC-machining centers for craftsmen's workshops, and ends with machines that take over routing and drilling operations in flexible production lines of the furniture industry.



Schematic illustration of a  
3 axe gantry CNC-machining  
center

The digital wood joints presented on this CD-ROM are developed in such a way, that they can be machined on all common CNC-machining centers without having to change the position of the workpiece. For training purposes on the CNC-training machine FBZ 40/30 of the MBA GmbH, the digital wood joints are provided on this CD-ROM in the CAD-format, which can be directly opened in the FBZ CAD/CAM software.

