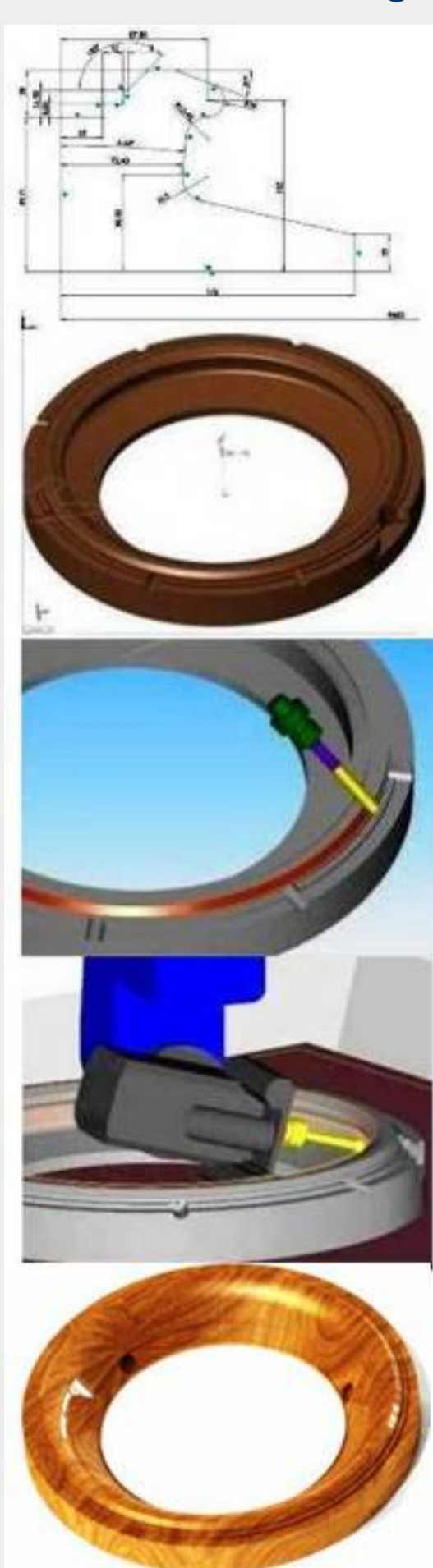


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SolidCAM in Woodmanufacturing


The picture sequence shows a woodmanufacturing example of our customer [Alfastreet](#), one of the leaders in Gaming Instruments. It demonstrates the Manufacturing of a Roulette wheel, starting from the 2D Sketch and 3D design in SolidWorks via CNC- Programming and Simulation in SolidCAM up to the final wooden part. This part has been machined on a [CMS](#) machine, for which SolidCAM also provides the post processor and the machine simulation.

SolidCAM infos

- [SolidCAM Professor´s corner](#)
- [Download "What´s new in SolidCAM2009" brochure...](#)
- [Order free Demo CD](#)

CAD/CAM-Programming has traditionally its focus on metalworking and precision manufacturing, but over the past years, it has also gained ground in the woodworking industry. The wood manufacturing shops today look very different from a few years ago. CNC machine tools are almost considered standard, and Woodworking centers with 5 simultaneous axes become widely adopted.

For the new generation of CNC machine tools, powerful CAD/CAM software is needed to drive them cost-effectively. SolidWorks is meanwhile widely spread for 3D furniture design, and partner software like "WoodWorks" helps to automate the 3D design of doors, kitchens and cabinets. Some important requirements for the CAM-Programming of wooden parts are:

- Seamless integration in standard 3D design systems
- Easy to learn and to use
- Customized Post processors to support the specialized Woodworking CNC machines

SolidCAM ideally fulfils these requirements, and consequently, we have won a lot of new woodworking customers across the world. Due to our flexibility in customizing post processors, we are not only able to support the most widely spread woodworking machines like...

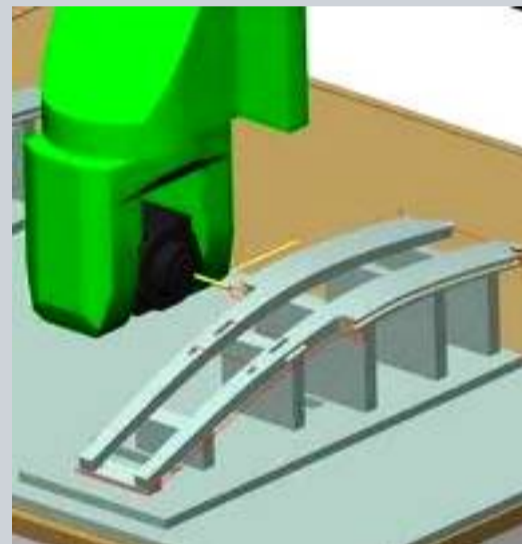
- [Biesse](#)
- [Homag](#)
- [CMS](#)
- [Sahos](#)

but also specialized CNC machines with non-standard controllers. In this Newsletter, we have presented some SolidCAM case studies from Eastern Europe, which demonstrate the spectrum of woodworking applications.

Emil Somekh
Managing Director
SolidCAM Ltd.

• Furniture Manufacturing in Slovenia

The company MURALES, founded in 1920, is an internationally known furniture manufacturer, located in Ljutomer (Slovenia). MURALES manufactures each year over 160,000 pieces of chairs, tables, corner benches, cabinets, exclusive products and built-in-furniture. The company employs more than 200 people.



The high quality of the MURALES´ furniture is mainly based on two factors. First of all, on the excellence and the craftsman skills of the workers, and secondly on the constant implementation of leading edge woodworking technology. In 2007, MURALES implemented a first seat of *SolidCAM + SolidWorks* for the 3D Design and the Machining of the wooden parts. The photo shows a Biesse machine, CNC programmed and simulated by SolidCAM, performing 5-axis machining for the side slots of a chair leg. Jernej Lokovsek, Manager of SolidCAM Slovenia, concludes: "Wooden products today have more complex shapes, so that efficient manufacturing of these parts becomes increasingly important. This is the main reason for the implementation of 5-axis CNC machine tools and appropriate software solutions in the woodworking industry. In Eastern Europe, the combined solution *SolidCAM+SolidWorks* solution is recognized as one of the best choices for the needs of wood design and manufacturing."

See Biesse machine in action...
• Furniture Manufacturing in Russia

The company [Astron](#), located in Moscow (Russia) has more than 10 years of experience in the furniture industry and produces furniture for living rooms, bedrooms and halls as well as commercial and trade exhibition equipment for various purposes. The production department of the company relies on the CNC machine technology of the German manufacturer Homag.



Astron is using the HOMAG Venture-3 CNC machine (3-axis) for the production of furniture made of rectangular cut chipboard parts. In addition, Astron is also manufacturing products made of shaped plywood. To enhance the manufacturing of these parts, Astron has recently invested in a HOMAG Venture-16 CNC machine (5 simultaneous axes) with a *woodWOP* CAM processing unit. Astron decided to use SolidCAM´s software to generate the G- Code for these machines. Yoav Meyuh, Senior Support Engineer for SolidCAM in Europe: "Due to the increasing demand to support these kind of machines, we have strenghtened our partnership with the Homag headquarters. Our joint efforts enable us to support always the newest *woodWOP* technology. Currently we support the current version 5, but we also ensure the support of future *woodWOP* versions".

• SolidCAM used for Robot Programming

The Department of Wood Science and Technology of the Biotechnical Faculty at the University of Ljubljana (Slovenia), an innovative user of SolidCAM, uses 6-axis [Kuka](#) robots for milling, drilling and polishing of wooden parts. The robot programs are generated by SolidCAM and postprocessed in the appropriate format; the KUKA.CAMRob software can convert this format to drive the 6-axis KUKA robot.



For the post processor generation, some limits of the robot control have been taken into account: all arcs need to be transformed into lines and instead of drilling cycles, G1 commands have to be used. Prof. Bojan Bucar, Head of the Chair of Mechanical processing technologies, states: "This solution is the first one in Slovenia. It is suitable for wood and light material manufacturing (Trimming of wooden parts, composite parts, aluminum parts, all kinds of drilling and polishing, prototyping, patterns, sculptured figures, decoration parts, etc.). This way of implementation ensures a quick and easy implementation for these applications; in addition, the robot solution (investment of about 60 k Euro) is also a cheap alternative to 5-axis CNC machine tools."

See video about Robot Machining...