

Productive SolidCAM

SolidCAM trims 5-axis parts at Big Bear Plastic Products Ltd

Vacuum forming specialist Big Bear Plastic Products Ltd, based in Droitwich, UK has achieved an enviable position, supplying to a diverse range of markets from Leisure to Aerospace.

The company is able to offer consultancy and design services along with manufacture and supply, assisting customers from concept to components including tooling and material selection, while not forgetting the incorporation of customer specific supply chain requirements.

The company's growth rate, coupled with the target of reducing project lead times, led Big Bear to invest in a CAM system that integrates with its current CAD solution - SolidWorks from Cadtek. The integrated SolidWorks+SolidCAM solution enables Big Bear to accept, manipulate and manufacture solid models, imported directly from its customers.

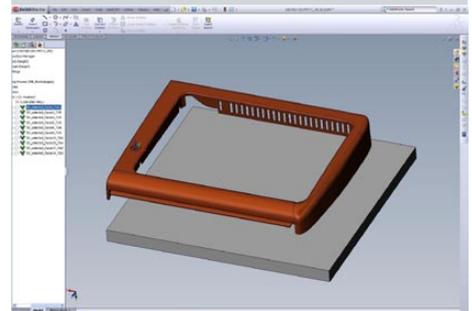
As component tolerances reduce and the pace of new tooling release and the need to link the validity of mould tooling, trim tooling and cutter path geometry increases, the use of an integrated CAD/CAM system gains importance. Being able to use customer generated model files to produce both tooling and cutter programs, has significantly improved project lead times.

Dan Patrick, Project engineer said, "It may still be necessary to manually program some components, which may not have valid model files, at the machine but with most new projects the model file is the heart of

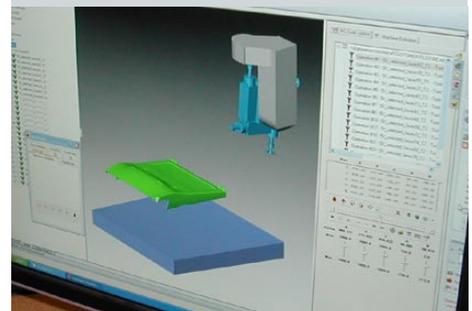


Panels being trimmed at Big Bear Plastic Products

the project, and it would be wrong not to use this as the source data at every opportunity." With advice from Cadtek, Big Bear Plastic Products Ltd installed two seats of SolidCAM, which integrate seamlessly with its SolidWorks CAD systems. Operating from inside SolidWorks, SolidCAM works directly with the model data, enabling the engineers at Big Bear Plastic Products Ltd to quickly add the 5-axis trimming paths once the datum and orientation of the part has been established. Dan Patrick added, "It isn't uncommon for new components to come in families, so we start by programming the most complex one, which contains the most features. We can then simply suppress some of the operations to get the trimming paths for the remaining simpler components." Once the toolpath has been prepared, SolidCAM verifies it, showing the tool, the holder and the machine tool, picking up any collisions in its graphical simulator and ensuring that the machine operates safely and reliably.



SolidCAM is easy to use, as it is "Single window" integrated in SolidWorks



SolidCAM not only generates the NC toolpaths, but also verifies them and simulates them including holder and machine tool.



Finished panel after trimming has been performed

The programming work load at Big Bear Plastic Products Ltd increased rapidly during 2007; as its engineers were becoming familiar with the software, support specialists from SolidCAM helped by creating some of the toolpaths. Dan Patrick said, "Assistance from SolidCAM helped us to overcome the initial backlog of work. Now that we have become more familiar, we regularly produce new trimming programs in less than half the time it would have previously taken."

Programming 'off line' in SolidCAM has also raised the efficiency of the physical trimming equipment. Parts programmed manually on the machine resulted in downtime, as trimming could not continue at the same time. While parts are programmed in SolidCAM the machine can run without interruption.

Big Bear's customers have seen benefits from the introduction of SolidCAM. Most customers now supply designs as CAD models, simplifying the transfer of data and ensuring that design intent is communicated unambiguously. Within Big Bear Plastic Products Ltd, more and more parts go through the SolidCAM route, eliminating the possibility of error and enabling the company to offer project turnaround times which would previously have been very difficult to achieve.

Dan Patrick concluded, "Growth at the company is continuing at a very healthy rate with an emphasis on lean manufacture. The introduction of SolidCAM has contributed to this expansion, enabling the company to manufacture more complex parts in a shorter lead time, raising throughput, and maximising the productivity of our trimming machines."

SolidCAM

Founded in 1984 by its Managing director Dr. Emil Somekh, SolidCAM provides manufacturing customers with a full suite of CAM software modules for 2.5D and 3D Milling, High-Speed Machining, Multi-sided Indexial 4/5 axes Milling, Simultaneous 5 axes Milling, Turning, Turn-Mill up to 5-axes and WireEDM. SolidCAM has the Certified Gold-product status from SolidWorks and provides seamless, single-window integration and full associativity to the SolidWorks design model including parts, assemblies and configurations. SolidCAM has today more than 12,000 seats installed. The company has been on a very rapid growth path since it implemented the SolidWorks integration strategy with annual growth rates over 30%. SolidCAM is sold by a worldwide reseller network in 46 countries.

www.solidcam.com

SolidCAM UK

SolidCAM UK was formed in January 2002 by the current directors to sell and support SolidCAM in the United Kingdom and Ireland. Since then, SolidCAM has been on a rapid growth path with annual growth rates more than 30%. SolidCAM UK is based in Barnsley, South Yorkshire, where a fully equipped training facility can be found for training and support purposes. All the people at SolidCAM UK are from engineering backgrounds, essential for the smooth operation, knowledge of the customer's requirements and levels of support.

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