

Berkshire Manufactured Products



Berkshire Manufactured Products, Inc. is a precision-metal stamping, machining and fabrication company serving aircraft engine, aerospace, communications, medical and other markets in Newburyport, MA.

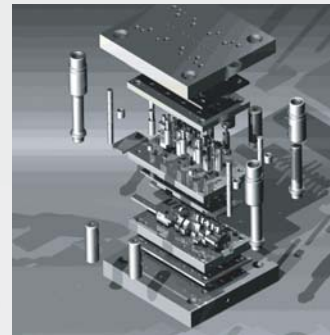
Berkshire today has 2 buildings and 140 employees with exports to Asia, Australia, Europe, and Canada. Emphasizing "Capable, Integrated, Precise," the company has been a primary supplier to domestic & international aerospace and jet engine industries since 1958. In 2004, Berkshire was named as one of the 24 companies in five New England states to supply components to the American-built US101 medium-lift helicopter, which is better known as "Marine One". Applying leading manufacturing philosophies and being certified by AS9000, Berkshire delivers customers with competitive price and superb quality. Powerful CAD technologies have been well practiced and have kept evolving; the company and the tool design team continue to apply the latest CAD technologies to achieve competitive edge over competition.

"I matched your blank to mine and they were within .001" of each other! It took me 2 days to calculate mine the old fashioned way. It took 3DQuickForm less than 10 minutes."

- Pete Meymaris, Berkshire Manufactured Products

Change in Technologies

Berkshire's senior tool designer, Peter Meymaris joined the tooling industry 30 years ago. Together with Berkshire, he went through the rapid change of tool design technologies from 1980. "I learned mini-computer based CAD/CAM in 1981. My first progressive die design job was modeled all in mini computer. It took me 6 weeks. The system claved but luckily I finished the project. PTC later gave a revolution to this design industry by offering parametric approach. After a decade, SolidWorks tuned up this approach to suit our need by offering a quick learning curve and 3D power," said Meymaris. "I also used to design in Cadkey. The change from Cadkey to SolidWorks was a big one but this gave me a better foundation too. SolidWorks applies the latest technologies like parametric, configuration, and powerful assembly utilities. Visualization and view management is very useful for me to debug in cases like a cam in a station. SolidWorks helps our company to take different jobs from companies using different CAD systems. The quality of the built-in translators of SolidWorks is good. This is important to contract manufacturers like us. Most of our works come from aerospace with complex shape. For nearly 20% to 30% of our works we need to use 3DQuickForm, a companion product of 3DQuickPress, to unfold. I can find the blank contour and the thinning within 5 minutes. More complex parts can take a few hours to unfold. I can directly apply the blank contour for the detail strip design. The integration



of 3DQuickForm with 3DQuickPress makes it a pleasure to conduct the formability test right at every complex forming station. Before we implemented SolidWorks/3DQuickPress design systems, we had a lot of guess work plus our bags of tricks. It was slow and incurred uncertainties. With SolidWorks/3DQuickPress technologies, we can visualize the design, and the problems. Our time is used to figure out the best layout strategy rather than wasting it on the laborious work in modeling and drafting. 3DQuickPress uses the best-in-class strip design approach. Two years ago, the company introduced deep draw calculator. This added the empirical approach to conventional finite element method. Deep draw calculator is very practical for modeling symmetric parts. By combining both an empirical method and finite element modeling, I have all the freedom to finish my job in time with accuracy."

Contribution of Technical Support

The successful implementation of SolidWorks / 3DQuickPress involved much professional support from Computer Aided Product and STS. "STS gives fast and reliable support in 3DQuickPress. Everyone in STS has a very good attitude and they are great people to work with," said Meymaris.



In order to appreciate the powerful SolidWorks / 3DQuickPress software, Berkshire used a number of high end workstations from DELL Computer. All of them are equipped with lot of memory, a fast graphic accelerator, multi-core to achieve a good balance

of graphics, CPU, memory and I/O. Meymaris shared his record in achieving 290 designs in 230days as a result of experienced die design, good hardware, plus productive software like SolidWorks / 3DQuickPress.

With more die makers implementing SolidWorks and 3DQuickPress in Massachusetts, Meymaris can now share and exchange experience with other 3DQuickPress users. Because of this Berkshire relies on authorized SolidWorks reseller Computer Aided Product, Inc and Strategic Technology Solutions (STS) for ongoing software training, implementation, and support.

For more than 45 years, Berkshire has built a superior reputation for the manufacture of complex precision stamping and machined components. Working with conventional metals, high temp alloys, titanium, kovar, plastics and other materials, Berkshire manufactures production and prototype parts for domestic and international markets in aircraft, aerospace, high tech, communications, medical and numerous other industries. For more information, visit www.berkshiremp.com or call (978) 462-8161.

