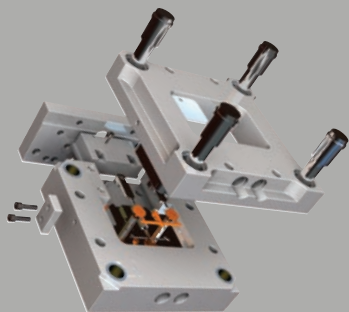


JK Mold Design

STREAMLINING THE MOLD DESIGN AND PRODUCTION PROCESS WITH SOLIDWORKS



SolidWorks software streamlines the mold design and production process for JK Mold Design by providing flexibility for data import and export, including tools for interrogating mold designs, and improving design communications with customers.

→ As owner of JK Mold Design, John Kreutzberger has designed molds for plastic injection-molded parts and aluminum and zinc die casting since the late 1970s. Based in Sacramento, California, JK Mold Design has established a reputation for speed, quality, and creativity in designing molds for products ranging from the display frame for the very first Apple® Macintosh® computer to medical devices used in air-quality monitoring systems, including those used to detect anthrax spores. Faced with increased global competition, JK Mold Design has differentiated itself as a high-end designer of complex molds demanding tight tolerances, a common requirement in the medical products industry.

JK Mold Design is a leading provider of high-end, complex mold designs for plastic injection-molded parts and aluminum and zinc die casting. Until the late 1990s, the contract design firm used the CADKEY® 2D design package to create engineering drawings for mold designs that customers use to manufacture products and components. According to John Kreutzberger, owner of JK Mold Design, 2D tools were adequate until he began receiving a variety of 3D design data, discovered he was spending an inordinate amount of time rebuilding models in 2D, and started landing projects requiring increasingly complex mold designs.

"I encountered problems with importing and exporting other CAD data formats," Kreutzberger explains. "In addition to the huge time waste associated with redrawing models in 2D, you run the risk of making mistakes by misinterpreting the model. My customers often could not import the 2D mold data I produced and would have to recreate a 3D model from my mold drawings, which created additional work and represented another opportunity for error." Kreutzberger says he realized he needed a versatile 3D CAD package that could import and export data from a variety of design systems in order to continue to provide the level of quality and service his customers had come to expect.

After evaluating several solid modeling packages, Kreutzberger selected the SolidWorks® 3D mechanical design system because it was the most versatile 3D package for handling diverse CAD data, provided access to a robust set of add-on mold design and production applications, included inherent mold design interrogation capabilities, produced engineering drawings and detail views automatically, and represented the best value for the price. Since implementing SolidWorks software, JK Mold Design has reduced its mold design cycle by 50 percent.

"Working in 3D with SolidWorks, I have reinvented myself as a mold designer and now provide my customers with a range of capabilities I simply could not offer before," Kreutzberger says.

Varied data in, usable data out

Whether working with geometry from 3D CAD systems, IGES files, or 2D design data, JK Mold Design has dramatically improved its data handling and manipulation capabilities with SolidWorks software. "SolidWorks is a really powerful tool that enables me to work directly from imported customer models," Kreutzberger notes.

"But importing design data is just part of the equation," he adds. "Providing my customers with a mold design in a readable, usable format is an even greater benefit. I no longer ask customers what file format they can read. I ask them what they prefer. I cannot remember a single instance in which a customer required a file format I could not provide with SolidWorks."



- Reduced mold design cycle by 50 percent
- Increased ability to import/export various data formats
- Improved design communications with customers
- Enhanced mold analysis capabilities

→ **CHALLENGE:** JK Mold Design is a leading provider of high-end, complex mold designs for plastic injection-molded parts and aluminum and zinc die casting. Faced with increasing competitive pressures, owner John Kreutzberger knew he had to upgrade his 2D CAD tools to a 3D solid modeling system in 1998.

→ **SOLUTION:** Kreutzberger selected the SolidWorks 3D mechanical design system because it can handle diverse CAD data, provides access to a range of add-on mold design and production applications, includes inherent mold design interrogation capabilities, produces engineering drawings and detail views automatically, and represents the best value for the price. By deploying SolidWorks software, JK Mold Design has cut its mold design cycle by 50 percent, increased its ability to import and export various data formats, improved design communication with customers, and enhanced its mold analysis capabilities.

Fully interrogating mold designs

Since implementing SolidWorks software in 1998, JK Mold Design has benefited from continual development of mold-specific functionality, such as parting line, draft, and undercut analysis tools, to fully interrogate mold designs of increasing complexity. Kreutzberger also uses MoldWorks® software, a SolidWorks Partner application from R&B Ltd., to automate the creation of mold components, holes, and endplates.

"The tools that SolidWorks has added over the past few years are very helpful for resolving moldability issues," Kreutzberger notes. "I like to use the cavity function in SolidWorks to do my core cavity splits, using the shrinkage capability to scale parts. Once I have a model of the mold, I can either send a SolidWorks model or an eDrawings™ file to the customer to show how I have resolved a moldability issue, such as sufficient draft.

"It's much easier for me to communicate issues to customers and resolve them quickly with a 3D model and these tools," he adds. "I am also seeing more and more SolidWorks models, which further streamlines the mold design process."

Accelerating mold creation

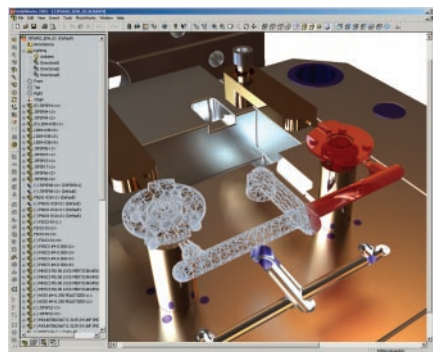
In addition to improving data handling and mold analysis capabilities, the transition to SolidWorks is enabling JK Mold Design to help its customers accelerate the mold production process. Using a SolidWorks model, the company's clients can automatically create tooling paths for CNC machines to produce molds using one of several integrated computer-aided manufacturing (CAM) applications, such as SURFCAM® software.

"I have received very good feedback from customers who use SolidWorks models for CNC machining," Kreutzberger stresses. "SolidWorks software streamlines the mold design process on my end, improves my ability to communicate with clients efficiently, and increases productivity in manufacturing on the customer end. That's a real positive for me in an increasingly competitive global market."

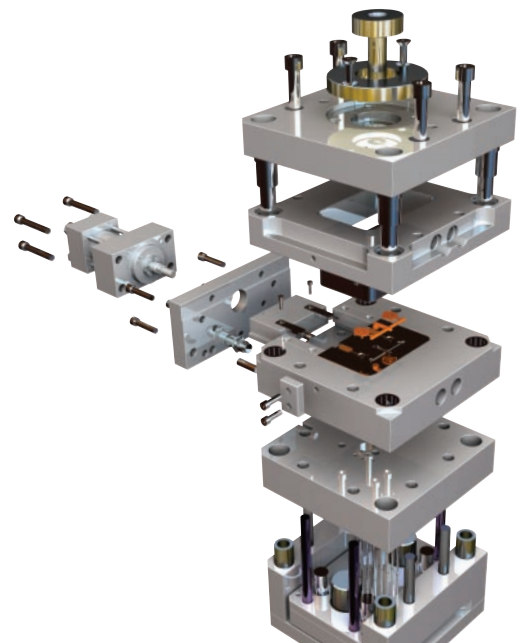
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JK Mold Design uses SolidWorks software to accelerate the mold production process by supporting automatic tool path creation through one of several fully integrated CAM applications, such as SURFCAM.



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