

KUKA Flexible Production Systems Corporation

A Tier One system integrator of stamping, welding and final assembly systems, KUKA Systems Corporation uses PARTsolutions to reduce systems development time and cost.

"By using PARTsolutions we have a catalogue system that can talk to all of our customers' CAD packages with true native CAD data. That is a huge asset to any engineering department."

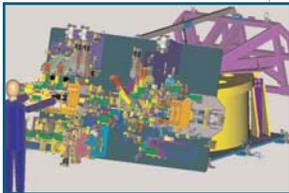
"Everybody wants to be on it. It's an excellent tool. It saves a lot of time and trouble. PARTsolutions allows us to focus on what we do well."

"When I put an ROI study together I was very conservative — and we'll significantly exceed our projections."

Rod Bereznicki

Supervisor, Mechanical Design Standards
& Future Development

KUKA Flexible Production Systems
Corporation



The time to design automotive assembly lines like the one shown above is reduced by automating the design process with PARTsolutions.

TIER ONE SUPPLIER IMPROVES DEVELOPMENT PRODUCTIVITY WITH PARTSOLUTIONS CATALOGUE IMPLEMENTATION

KUKA Flexible Production Systems Corporation is a Tier One supplier of production systems to DaimlerChrysler, Ford Motor Company, and General Motors as well as companies like Harley-Davidson, Dana Corporation, Deere & Company, TRW, Visteon, Eaton Corporation and many others.

Improving Productivity and Communication

"We're in a very competitive business," explained Rod Bereznicki, Supervisor of Mechanical Design at KUKA. "We're continually searching for ways to become more effective and competitive. We recently undertook a series of initiatives aimed at improving communication throughout the lifecycle of a project inside our walls."

PARTsolutions was one of a number of technologies implemented at KUKA to improve speed and cost efficiencies.

The Dilemma: An Effective Approach to Commercial Parts Libraries

"After we reviewed our activities, the opportunities were staring us in the face," Bereznicki said. "A significant part of our design work, 30% or more, involves commercial parts purchased from our suppliers. Over the years we'd built internal libraries of vendor parts that we modeled from paper catalogues. The problem is that our customers require us to deliver our engineering data in native CAD format for each of their different CAD systems — CATIA®, Ford FIDES, Unigraphics®, SolidWorks® and AutoCAD®."

"Maintaining vendor catalogues in multiple systems was time consuming and expensive. And, it wasn't our data. We don't make money modeling vendor parts."

Reduced Library Costs with Great Impact

"When we found PARTsolutions we could see that we could use it to reduce our CAD library costs and generate increased design productivity as well. PARTsolutions allows us to have one library system to support all five of our CAD systems — and the catalogues are maintained by the suppliers." Bereznicki said.

Out of the Box Implementation

When he began to implement PARTsolutions, Bereznicki was impressed. "I've implemented a lot of tools - some good ones, and some bad ones. High end, like PDM systems, and low end tools as well. Most require a lot of time and cost for customization to fit our business model. With PARTsolutions we found a tool that is 90% - right out of the box," Bereznicki continued.

"I've implemented a lot of CAD tools and none have ever been implemented as easily as PARTsolutions. It dropped into our business model cleanly. That saved me a lot of heartache and saved the company money."

Avoiding Shelfware: What Will the Users Think?

Even more important to Bereznicki is avoiding the "shelfware" problem. Will people use the tool? "If people can't pick up a system quickly, it will rapidly get a bad name. When we rolled out PARTsolutions everybody wanted it. Then, when they began using it, they wanted more of it. Today every one of our design engineers uses PARTsolutions regularly."

- Reduced 30% of design work from hours to minutes
- Improved order accuracy for commercial items
- Excellent, rapid user acceptance
- Reduced commercial library costs

Saving Design Time and Improving Design Quality

A key factor driving user acceptance of PARTsolutions at KUKA is its ability to save design time by reducing common design tasks from hours to a few minutes.

"What PARTsolutions does is smart assemblies. The user answers three or four questions about what part he needs, PARTsolutions assembles it and inserts it into his CAD system. The ease of doing this saves significant amounts of time," Bereznicki commented.

"We now have 80% of our core commercial items available on PARTsolutions. Before PARTsolutions we modeled them on our own."

Also, since the user can see a shaded image early in the selection process, PARTsolutions helps KUKA make better design choices of vendor parts. "You can visualize it right off the bat. Now we can focus on doing our job not on modeling vendor parts. "When I put an ROI study together I was, of course, very conservative — and we'll exceed our projections," Bereznicki explained.

Accurate Part Ordering

One key area of payoff is reduced part ordering errors. "PARTsolutions provides one part number that represents the selected assembly and it automatically populates the BOM with the correct part number. This eliminates a lot of typing errors. No fudge factors. No misinterpretation," continued Bereznicki. "A correct part number not only helps us get an accurate order but it affects the entire stream. Errors cause high costs in manufacturing. Accuracy from engineering is very important."

Supplier Benefits

Bereznicki also noted that suppliers reap many benefits from KUKA's use of PARTsolutions. "Our engineers make decisions on what components get purchased based on availability in the library. If a vendor's data is easily accessible at that time we use them. For example, we use a lot of PHD parts because their parts are in the system."

Bereznicki listed more subtle advantages to vendor supplied catalogues as well. "The difference between us modeling a vendor part and the vendor modeling it is that I'm only going to model what I use... not their entire catalogue. That means we focus only on one family of what they have to offer, and we'll never see their other families. And, vendor catalogues include more detail than we would if we modeled the parts ourselves. The added detail allows us to design to tighter conditions since we know the model is correct."

"As far as a marketing strategy it would behoove suppliers to get on board," Bereznicki concluded.

"If one of my engineers needs a component and one vendor has the data in the catalogue and another doesn't, we're going to do business with the guy that does. We don't make money modeling their parts."

"With PARTsolutions, it's much better than finding parts on vendor web sites. With individual sites the engineer has to identify a vendor, find their web site, understand how to navigate and search their site - and remember every site is different - then he has to pull data down. Most likely he will receive an IGES file that will need some clean up and lack attach points. Often he'll give up and revert to a paper catalogue which may have data that is out of date."

"That's how you get odd things in the back door when using paper catalogues. PARTsolutions solves this problem for us."

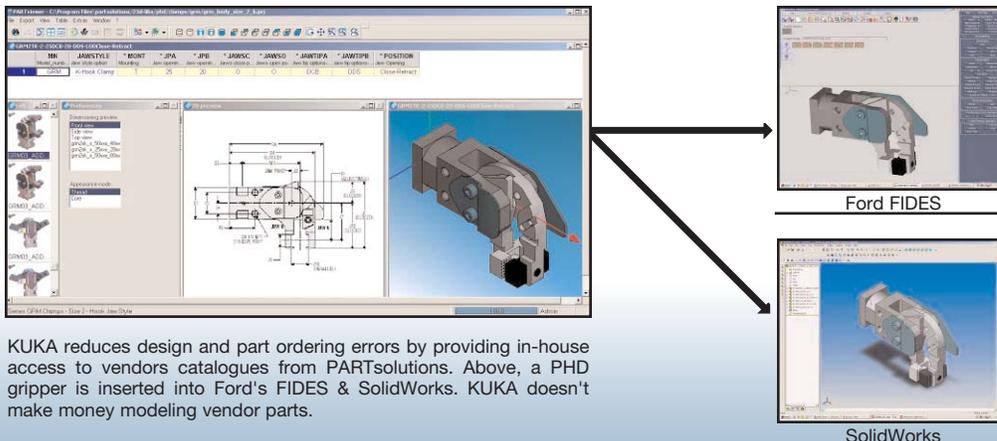
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KUKA reduces design and part ordering errors by providing in-house access to vendors catalogues from PARTsolutions. Above, a PHD gripper is inserted into Ford's FIDES & SolidWorks. KUKA doesn't make money modeling vendor parts.