

GLOBAL SHOP SOLUTIONS CASE STUDY

RAM Precision Industries

Headquartered in Dayton, Ohio, *RAM Precision Industries* is a contract manufacturer specializing in four diverse product lines. As a leading international tooling supplier to the beer, beverage, food and sanitary container industries, RAM provides precision container and packaging tools for their customers' production lines. On the medical products side, RAM Precision Industries manufactures orthopedic implants for spines, ankles, wrists and shoulders, and a wide variety of instrumentation.



Aerial view of RAM Precision Industries' campus.



RAM Precision Industries' turning department.

The third product line consists of precision parts for the aerospace and defense industries, including components for next-generation unmanned aerial vehicle engines, auxiliary power units and fuel system components for jet aircraft engines. As a contract manufacturer, RAM Precision Industries provides independent and original equipment manufacturers (OEMs) with complete and customizable turnkey solutions for their manufacturing needs.

These four product lines have three things in common. One, they all involve the production of tight tolerance precision components. Two, they're all made within the same production plant. And three, they're all managed within Global Shop Solutions ERP software.

Managing 900 Active Work Orders with Real-Time Data

Prior to implementing Global Shop Solutions ERP software, production data resided in a wide variety of manual spreadsheets and other offline locations. According to Plant Manager Jason Trubee, upgrading to Global Shop Solutions ERP software, where all the data is centralized, online and fully integrated in one system, created a revolution in process improvements the business.

"Having all the data in one place gives everyone in the company instant access to the information they need to know from multiple computers and terminals," says Trubee. "Plus, the system automatically updates itself, which makes the data as close to real-time as you can get."

"We average about 900 active make-to-order jobs going through the shop floor at any given time," he says. "The ability to electronically capture, review and manipulate the data for every job in near-real time has dramatically improved our [shop floor control](#) and transformed the way we do business."

Expediting Jobs with Graphic Scheduling

With four different product lines all producing custom make-to-order work, scheduling jobs presents one of the biggest challenges for RAM Precision Industries – especially when customers need to expedite a job already in progress or change a previously established due date. The powerful [Advanced Planning & Scheduling \(APS\)](#) application can handle both situations with ease.

In particular, RAM Precision Industries schedulers use the application's graphic scheduling capabilities to get a quick overview of capacity on each workcenter. At a glance, this feature identifies any constrained operations, the capacity of those operations, and when RAM Precision Industries can realistically complete a specific order without affecting other orders.

"When expediting a job in progress, first we look on the work order to see what has been routed and what is left in terms of labor hours and pieces, to complete the job" says Trubee. "From there, we look at other customer needs and use the graphic scheduling to see how and where we can move jobs around in the most efficient manner."

"We like the graphic scheduling feature of APS because it paints a picture that is quickly and easily understood," he notes. "Instead of having to process a lot of numbers in your head, you can see at a glance where you stand with capacity on each job. It's such a useful feature that several of our cross-functional teams use it as well. For example, when **writing up an order** the sales team will look at graphical scheduling to determine whether a job will require overtime, an expediting fee or anything else out of the ordinary. It's a powerful tool that makes everyone's job easier and more efficient."

Improvement in Labor Efficiency

Simplifying processes and controlling costs is a critical factor for competing in today's global manufacturing markets. Global Shop Solutions ERP software helps RAM Precision Industries accomplish both in several different ways – starting with the ability to **track job costs** while work is still in progress.

"As soon as a job is finished, we can review all labor and material costs to see our overall costs and spend," says Trubee. "If we don't like what we see, we can then brainstorm ways to process the job differently and do it better the next time."

In addition, RAM Precision Industries can analyze jobs in progress to see whether they were effectively quoted and whether they will make or even possibly improve on the promised delivery date. Perhaps most important, the software enables them to determine the efficiency of machinists on an individual and collective basis.

"Knowing where we stand in terms of throughput allows us to give ongoing feedback to our machinists," explains Trubee. "For example, we can show them how they are performing compared to estimated times. If they're not performing up to expectations we can look for ways to improve performance. As a result, we've improved overall labor efficiency by 10%, generating significant savings on our labor costs."

Total Control of the Shop Floor

As plant manager, Trubee uses many of Global Shop Solutions ERP software's different applications to keep his finger on the pulse of operations throughout the day. He typically starts each morning by accessing the Shop Management application to review labor balancing from the previous day and rectify any carryover costs that might have occurred from operators forgetting to log on or off a job sequence.

Next he calls up the work orders of problem jobs to review their status and see how their costs are tracking. From there, he might set meetings with operators and supervisors to generate strategies for improvement and driving down the costs. Then he moves on to graphic scheduling to get a big-picture overview of the overall workload and capacity planning from a labor hours standpoint.

"Previously we tracked everything in manual spreadsheets, where the data wasn't entered until after the fact," says Trubee. "Now, Global Shop Solutions automatically captures the time when operators log on and off of jobs, and automatically assigns materials to the job as soon as we purchase them. Having all the data available in real time and in one central location helps us identify problems and track costs a lot quicker. And we can pull the data a month or year later and know it's still accurate. As long as we enter the data correctly into the system, Global Shop Solutions gives us total control over the shop floor."



A sampling of tight tolerance parts (+/- .0001") produced by RAM Precision Industries.

More Improvement on the Horizon

Meanwhile, the ability to seamlessly integrate with Crystal reports allows RAM Precision Industries to easily create **custom reports** that format the data the way managers prefer to see it. These reports allow managers to make more informed decisions on key areas ranging from the **cost of quality** (from a scrap standpoint), rework labor costs, customer stocking programs, and more.



RAM Precision Industries has true control of their shop floor.

traceability to auto purchasing, inventory, accounting and more, I can't think of one area where the software hasn't made a difference."

"The best part is we haven't come close to using the system's full capabilities," he concludes. "We're starting to explore some of the applications we haven't used yet, like Quality Control and **Project Management**. But despite all we've accomplished with the software so far, it's nice to know there's a lot more we can do to further lean our business and improve our production processes."

Inventory and materials management is easier and more accurate. Managers and operators can search for any part or material from the Supply & Demand screen and instantly locate the bin where that item resides. RAM Precision Industries also uses the system to efficiently manage its finished goods inventory for customers who draw upon stock items throughout the year. Having all the data reside in one location and be instantly accessible and up to date facilitates fast and accurate inventory counts while controlling inventory costs.

Tracking and analyzing costs by jobs, group of jobs, part or customer enables RAM Precision Industries to offer more competitive pricing. The ability to track materials back for years enables them to estimate and quote new jobs more accurately. And maintaining quality data within the system makes it easier to track and document the traceability of materials required for the medical equipment products.

"Global Shop Solutions does so many things for us that we no longer need to maintain separate systems to manage each part of the business," concludes Trubee. "From job tracking and