

GLOBAL SHOP SOLUTIONS CASE STUDY

Corsair Electrical Connectors, Inc.

Today's sophisticated aircraft require miles of electrical wiring, and someone has to make the parts that bring all that wiring together. Introducing *Corsair Electrical Connectors, Inc.* a privately-held contract manufacturing company that specializes in producing military, commercial aircraft, and aerospace connectors for 13 value-added distributors, several OEMs, and the U.S. government.



Corsair Electrical Connectors' unique logo



Corsair Electrical Connectors' catalog of parts

Operating out of a 40,000-square-foot production facility in Irvine, California, Corsair Electrical Connectors makes connectors that serve as the junction for the different electrical cables and wiring used throughout an aircraft. The company's 120+ employees use more than 25 state-of-the-art CNC machines and 10 injection molding machines to manufacture more than 30,000 different connector products – all of which are made in compliance with the aircraft industry's strict quality standards.

Unlike most aerospace connector manufacturers that build to stock, Corsair Electrical Connectors makes their parts to customer orders. This leads to some unique challenges in the areas of *inventory management*, minimizing lead times, and efficient *job scheduling*. In fact, according to Operations Director Amir Saket, the desire to minimize lead times was a primary factor in the company's decision to select Global Shop Solutions as their ERP software in early 2012.

"We picked Global Shop Solutions mainly because it fit our business model of making parts to order," says Saket. "In our industry, fast response time is critical, which presents a real challenge when every job is different from the previous one. Global Shop Solutions gives us the flexibility we need by allowing us to create all our jobs to specific customer orders rather than to stock."

Better "Lego" Management

Corsair Electrical Connectors can have up to 700 custom jobs moving through the shop floor at any given time. Depending on the part, a job can take anywhere from three days to two months to complete. This creates a highly complex manufacturing environment where data, raw materials, and labor all must come together at the same time in order to get the product out the door on schedule.

According to Ken Payne, Vice President of Engineering, managing this constantly fluctuating environment has become a lot easier since implementing Global Shop Solutions ERP software.

"We look at our business like building LEGOS," he says. "It takes a variety of different shapes, sizes and colors of LEGO bricks to build a part, and the trick is to get all the red, blue, green and yellow LEGOS in the right place at the right time. Before Global Shop Solutions, we did everything by the seat of our pants. As a result, we often had yellow LEGOS sitting around for months while we didn't even have the green ones ordered yet."

“You can’t make a part if you don’t have the raw materials in inventory, which is another reason we got Global Shop Solutions,” explains Payne. “It allows us to combine [purchase orders](#) and schedule them in advance for better pricing and improved purchasing efficiencies. Now we no longer have to wait around for the green LEGOS to come in so we can make the part.”

In addition to more efficient “LEGO procurement,” Global Shop Solutions ERP software has simplified several other key areas for Corsair Electrical Connectors. Although the firm makes parts to a customer’s order, most of them have common components. Payne is now able to combine those common parts into lower levels on the [BOM](#) so that production can group and batch part numbers more efficiently.

It also enables [Production Control](#) to combine all the requirements for in-house manufacturing on all purchases, and provides a true picture of the company’s backlog and customer demand. This, in turn, has reduced the company’s past-due jobs while significantly improving on-time delivery rates. Equally important, it enables the company to manage inventory with much greater precision.

“It’s hard to tell exactly how much we’ve reduced inventory,” says Saket, “because we’re introducing new product lines every month, which adds to total inventory. But I would estimate a 20% improvement at minimum. We’ve also reduced our receivables through regular use of the [Financial](#) module, which integrates seamlessly with all the shop floor data.”

Improved On-Time Delivery, Traceability

Where has Global Shop Solutions ERP software made the biggest difference for Corsair Electrical Connectors?

“It’s hard to pick just one area,” says Saket, “although I would probably go with our huge improvement in on-time delivery. And that’s come about only because of all the other efficiencies Global Shop Solutions generates on the shop floor. Currently, we’re tracking on-time delivery through past due reductions, which have declined about 60%. But as we get more comfortable with the software, we’re getting closer to the point where we can track on-time delivery rates with the accuracy we want.”

Off the shop floor, Global Shop Solutions ERP software has dramatically improved the company’s financial consistency. Previously, Corsair Electrical Connectors used Quickbooks, which required a lot of manual data entry. With Global Shop Solutions ERP software, all the applications talk to each other and all the numbers flow right into the general ledger. This speeds up the time it takes to generate reports and close the books. Plus it reduces the errors that can occur when transferring data from one system to another.

Global Shop Solutions ERP software has also improved traceability for every part that moves through the shop floor, an essential activity for every [aerospace manufacturer](#).

“We’ve always had traceability,” notes Payne, “but it used to take a lot of time and required lengthy paper trails. Now it’s all done electronically. Global Shop Solutions also assists with risk assessment. Before we can take on a contract, we have to verify that we have the staff capable of completing it and go through several exercises in order to get certified. Global Shop Solutions makes it easy to track, store, and provide the objective evidence we need to qualify for contracts and industry certifications.”

A Culture of Communication

Like most Global Shop Solutions ERP software customers, Corsair Electrical Connectors continues to develop its skill and fluency with the software as time goes by.

Thanks to the ability to build BOMs and routers quicker and more efficiently, the company continues to improve its [job costing process](#).



One of Corsair Electrical Connectors’ C200 production turning machines, used to manufacture complex parts.

They recently implemented the [Shop Floor Data Collection](#) stations on the shop floor. Now, workers simply scan the work order to log on to each job. And they're using the barcode labels for all purchased materials that go into inventory, as well as everything that gets shipped out the back door.

They're starting to use seamless integration with Crystal reports to create some [custom reports](#). But so far, they're focusing on getting the most out of the system right out of the box.

"We're also starting to use the system's capacity planning features, which will allow us to do a better job of scheduling workflow and controlling labor costs," says Saket. "There's a lot of other features we'd like to use, but like any business we only have so much time and training resources available."

Perhaps most importantly, their use of Global Shop Solutions ERP software is encouraging a discipline of data integrity and better communication throughout the company.

"Before Global Shop Solutions, we basically ran the company with independent spreadsheets in each corner of the business," says Payne. "Some folks didn't like to share their spreadsheets, so we didn't always have the best communication from one department to another."

"Having one central database to organize, store, and provide easy access to data encourages the sharing of information. For example, in the Supply & Demand screen you can go into almost any screen and find out what is live within the system. Anyone in the company can do this, and the data is real time in terms of what's happening on the shop floor."



An assortment of Corsair Electrical Connectors' custom aircraft connector parts.

Making Better Decisions

Experienced Global Shop Solutions ERP software users know there's more to the system than just cutting costs and simplifying operations. At its core, it is a powerful business management tool that enhances the quality of business decisions by putting the right information in the hands of the people who need it.

For example at Corsair Electrical Connectors, prior to Global Shop Solutions ERP software, when a customer order came in, the buyer would order the minimum quantity of raw materials plus 10%. If another order came in the next day, he would do it again. More often than not, this resulted in inflated inventory levels for one part number and a deficiency in another.

"Global Shop Solutions gives us great visibility in all areas of the business – everything from customer orders to BOMs and routers to financials," says Saket. "The ability to see customer demand and have correct inventory counts in real time helps us make better decisions about what to buy and when."

Going forward, Corsair Electrical Connectors' goal is to continue to develop company-wide fluency with the software while encouraging individuals to take more initiative in developing their own skills.

"Global Shop Solutions has a lot of good training tools, such as the [online videos and webinars](#)," notes Payne, "but we haven't had time to make much use of them yet. We've mostly been focusing on getting good at the basics before expanding our Global Shop Solutions repertoire."

"Fortunately, the software is user-friendly and more intuitive than most ERP systems. So we encourage a buddy system whereby people help each other develop their skills with the software. I can't wait to see what we can do in the next few years."