

## GLOBAL SHOP SOLUTIONS CASE STUDY

# Phase Technologies

Located in Rapid City, South Dakota, *Phase Technologies* is an OEM manufacturer of power electronics equipment for irrigation, water pumping, HVAC, CNC/machine shop, oil and gas, and other industrial applications. The company specializes in variable frequency drives (VFDs) of 1/3 to 500 horsepower and digital phase converters for 240V and 480V applications.



*An employee works on the assembly of one of Phase Technologies' Phase Perfect digital phase converters.*



*Inventory shelves with various panels in Phase Technologies' panel shop.*

Founded in 1999, Phase Technologies started out in a garage of a local electrical engineering professor, developing the world's first digital phase converter, the Phase Perfect®. Since then the company has expanded into producing a complete line of VFDs and improving the Phase Perfect technology. The company is currently recognized as the world's leading innovator of phase conversion and VFD technologies.

Along the way, ownership recognized that a rapidly growing company that manufactures complex assemblies for rugged outdoor environments needs more than Excel spreadsheets and QuickBooks to manage the business. In 2010, Phase Technologies implemented [Global Shop Solutions ERP software](#), launching a new era of unprecedented growth for the company.

"At the time we acquired Global Shop Solutions, we made about 70 different products," says Glenn Bailey, Production Manager and ERP 'guru' at Phase Technologies. "These days we manufacture more than 1,800 different versions of our products – an impossible task without Global Shop Solutions."

### **Make Any Product, Any Time**

As a high-mix, low-volume producer of mostly custom power electronics equipment, one of Phase Technologies' biggest challenges comes from maintaining enough inventory to meet lead times expectations of three to 10 business days.

"Based on historical data, we know we will sell a certain number of systems every day, but we don't know which ones," says Bailey. "So we have to be ready to build just about anything we sell in a very short time. With 1,800 products available to customers, we can't wait until we sell a job to order the parts. We need to know exactly what we have in inventory at any given time, and Global Shop Solutions provides the visibility of data to do that."

"I spend a lot of time in the **Inventory Control** module monitoring parts on hand, on order, and reorder points," continues Bailey. "In the past, we couldn't tell how many of a certain part we used in a year because we didn't have the data. Now it's there with just a few clicks of the mouse. With the data readily available and the ability to forecast into the future, we can set appropriate reorder points, so we have the parts on hand when we need them."

Global Shop Solutions also helps Bailey track inventory turns with precision and make cost-effective decisions on reorder set points. More efficient use of inventory has also reduced carrying costs while making it easier to conduct cycle counts.

### **Taking Care of Business**

In addition to keeping tabs on inventory, Bailey uses many different modules to perform a variety of shop tasks. In **Shop Floor Control**, he generates work orders to get jobs started and helps issue materials when needed. He also assists with estimating, routing and building BOMs, closing operational steps, and WIPing assemblies to finished goods. He uses the General Ledger to check on accounts payable and receivable, and the **Quality Control** module when product quality issues arise.

"One of the real strengths of the software is the easy access to historical data in so many areas of the business," says Bailey. "We have a number of products we haven't made in a long time, but we never know when we'll get an order for one of them. With Global Shop Solutions, I can easily call up the history to determine whether we still make all the parts for that product, and if not, what new part the customer will need."

Bailey also appreciates the ability to create **tailored** Crystal reports to handle certain situations. For example, sometimes closed orders don't align with how many parts are actually in the bin. To address this disparity, Bailey created a Crystal report to identify when parts haven't been issued to a work order.

"By issuing the correct number of parts to the job, I can align the real-world count with the count in the system," says Bailey. "I can also investigate how the order got closed without issuing any material to see that it doesn't happen again."

### **Accurate Job Costing**

Their ERP software has also improved a process critical to every manufacturing business – tracking the true costs of making each product.

"Our business keeps growing, but there's a difference between growth and profitable growth," notes Bailey. "Thanks to the software, we definitely have a better understanding of our true costs. Global Shop Solutions tells if we're making or losing money on a product, and the data tells us why. This helps us make informed decisions about which direction to go with individual products and product lines."

"Global Shop Solutions can do so many things for a manufacturing business, but it all comes down to how you put data into the system and how you get it out," concludes Bailey. "It took us a while to set up and configure the system in order to do things the way we like to do them. But we've been using the system for 10 years and I can't imagine doing what we do without it."



*An employee preparing to ship some of Phase Technologies' high quality products to customers.*