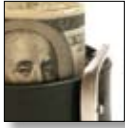


WOODdigest



LEAN MANUFACTURING: A CASE STUDY

'LEAN' HELPS FABRICATOR SERVE BROAD NATIONWIDE CLIENT BASE

Giffin Interior & Fixture uses customized lean program to eliminate all types of waste



By Steve Ehle

At Giffin Interior & Fixture, the implementation of a "lean" manufacturing program had as much to do with eliminating as creating a "new feel" to the shop. So says company president Gordon Giffin.

"On the most basic level, our lean program has provided us with an improved working environment and a completely new feel to the shop," says Giffin. "Additionally, it has contributed to a change in attitude that has opened up possibilities for the company, not only in taking on more work."

Giffin Interior & Fixture, Inc. is a fabricator of high-end custom casework and architectural millwork. The company's market area is nationwide.

"We serve a diverse clientele, ranging from hospitals to major league ballparks to off-track betting facilities and private residences," Giffin explains. "We do not consider ourselves to be specialists in any one sector because we have a great deal of experience in all of these areas. We're able to serve such a broad mix of clients because of the quality of our employees."



All four major pieces of CNC equipment at Giffin Interior & Fixture are integrated in to the company's lean concept and are linked. A key piece of equipment is a Homag BOF611 CNC machining center with Flex 5 Aggregate. The BOF, purchased through Stiles Machinery, is the centerpiece of the company's nested base manufacturing process within the component production work cell. The BOF utilizes barcoding to set up the machine and track orders and parts. Machine linkage within the entire plant is accomplished using a number of software packages, including Pattern Systems, Cutrite, Woodwop and Holzlink.

Giffin employees are encouraged to develop in the areas where they are strongest. From estimating to purchasing to fabrication to installation, the company has employees who have honed their skills to focus on certain types of projects.

Says Giffin: "For example, one of our estimators handles 99 percent of all the healthcare projects that we bid, while another one bids most of the residential work."

The Bridgeville, Pa. company has seen consistent growth over the years, due mainly to the company's stature in the industry.

"The growth of our company is based mainly on our reputation," says Giffin. "We're known as the best in our field because we continually exceed our clients' expectations in terms of quality and time."

"In fact, a recent project that we bid called for the Giffin quality of workmanship as a specification. It is that kind of recognition from general contractors and architects that has allowed us to grow."

Gordon Giffin was recently asked about how he has implemented a new lean program and how it has helped the company become a leader in the industry.

Wood Digest: What is the basic design-engineer-to-install process for any one job? What design software package do you use? Do you install?

Gordon Giffin: We're not designers. Our focus is on making others' visions a reality. When we are awarded a project, members from each department involved in the project meet to communicate exactly what our goals and expectations for the project are. The project coordinator is the point person between Giffin

Giffin Interior & Fixture, Inc.

Year established: 1980
Location: Bridgeville, Pa.
Products: Commercial, education, entertainment, food service, government, healthcare, hospitality, residential and retail interiors and fixtures
Market area: Nationwide
Facility size: 80,000 sq. ft.
Employees: 100
President: Gordon Giffin
Yearly sales volume: \$12 million-plus

and the clients and also supervises each phase of production from drafting to fabrication to delivery and installation. We install 95 percent of what we fabricate because we believe that our people know our work best. The craftsmen who perform our installations are also experts in their field.

WD: How is your estimating process accomplished? Do you utilize a software package which feeds off benchmark data from previous jobs?

Giffin: Each project has a unique takeoff.



Gordon Giffin, president, Giffin Interior & Fixture

WD: How would you describe your lean manufacturing scheme?

Giffin: We have modified the lean system to fit our needs. Our customization involved the elimination of wasted space, wasted component handling and the creation of a circular fabrication process. We reorganized the shop floor so material flows from receiving to fabrication to shipping in a way that is seamless and doesn't bottleneck at any point.

WD: According to some definers of lean, the basic premise of lean is "eliminating waste." But it is more than that. What else does it do for your company, besides eliminating waste?

Giffin: Lean allowed us to speed up our delivery time, keep less material in inventory and control the flow of work in the shop. Additionally, it has helped to create a more upbeat and motivated work environment by eliminating the physical hampers to productivity.

WD: You use primarily European-made machines that were built to take labor out of the production equation, in a "batch and queue" model. In your business, where you produce mostly custom products for a number of sectors, how do you balance that high-production vs. mass customization issue, given your highly automated production environment?

Giffin: We strive to eliminate the "queue" in the "batch and queue" model by controlling how projects are sent to the shop. Again by employing carpenters who are master craftsmen as well as master fabricators, we are able to complete highly complicated and detailed custom products as well as products for a more institutional setting. We also utilize a kanban shop ticket system to pull the product through the shop and ensure that we are only producing what we need.

WD: Is "continuous improvement" embedded in your lean program? If so, how?

Giffin: Continuous improvement is a part of our corporate culture. Our lean program itself is an example of that.

WD: Is there statistical evidence available that demonstrates a positive impact on your financial performance?

Giffin: We're still in the implementation and outlay phases of the lean conversion so it has not yet generated a statistical resonance, but we anticipate a quantifiable impact by the end of 2006.

WD: Do you feel your lean program can provide a basis for creating sustainable competitive differential?

Giffin: Yes, lean will allow us to take on a greater volume of work without increasing cost, while maintaining the quality of production that we are known for.

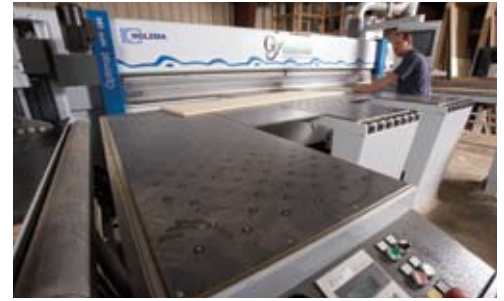
WD: Consumers are increasingly demanding of manufacturers for choice, product personalization, speed and basic customer service. How has your lean program assisted in improving your engineer-to-order, custom manufacturing capabilities?

Giffin: The efficiency provided by our lean program implementation is really the base for improving the services required by our clients. By consulting Giffin for their custom wood-working, our clients immediately have access to a shop that specializes in building exactly what their designs require, and the improvements because of the lean program have enhanced that capability.

The new machinery and layout improve the speed and efficiency that we can deliver our customers' products, and also improve our capabilities for personalizing the work we do for them. Customer service is something that comes naturally with the work we do. In order to customize according to our customers' demands, we must have excellent service to go along with it.

WD: What are your major pieces of production equipment and how have you integrated them? Bar codes? Paper? Other?

Giffin: Four main components of our



At the head of the manufacturing scheme at Giffin is a Holzma HPP380 with Opti Lift. Barcodes are applied at the saw station.

production system are linked. The Holzma HPP380 — with Opti Lift, the Homag BOF611 with Flex 5 Aggregate, the Weeke BP12 and the Brandt KD94 with Ligmatech return are integrated through several different programs including Pattern Systems, Cutrite, Woodwop and Holzlink. The Weeke and BOF also utilize a bar coding system. The BOF is the centerpiece of our nested-base manufacturing process within the work cell.

As a part of our transition to lean, we have adopted a new shop ticket system, which was designed to be a kanban that is the communication method that supports pull production. The shop tickets act as production work orders and follow the components being manufactured from raw material through the work cell to shipping.

WD: In general, what has your lean program and lean thinking brought to your company?

Giffin: On the most basic level, our lean program has provided us with an improved working environment and a completely new feel to the shop. Additionally, it has contributed to a change in attitude that has opened up possibilities for the company, not only in taking on more work. Implementing the program helped gear our thinking toward efficiency in all aspects, beyond just new machinery and a new shop layout. We are now looking to the future, coming up with new ways to improve all of our processes and wondering, "What can we do next?" **WD**

A Weeke BP12 machining center utilizes barcoding technology to track orders and parts and set up the machine.

