



Marlin Steel Wire Products

ENGINEERED SOLUTIONS FAST SINCE 1968



Case Studies: Check Fixtures Save Time and Money

by Maggie McFadden
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As recently as November 2008, [Marlin Steel Wire Products LLC](#) (Baltimore), manufacturer of steel wire baskets, hooks and shelves, used to make one check fixture every four to eight hours. "We had situations where we would get an order, but because our fixture department was committed already, it would delay things in production," recalls Drew Greenblatt, president of Marlin.



While at one time Marlin's fixturing department was only able to make one or two check fixtures a day, the company now can make more than a dozen per day thanks to the 5012 computer numerical control (CNC) machine from XYZ Automation Inc. (Cincinnati). Marlin Steel Wire invested in the CNC to automate production of [go/no-go fixtures](#) to check the specs and quality of its customers' orders. With the new machine, an engineer at Marlin now can make a go/no-go fixture in about 20 minutes.

Marlin manufactures steel wire baskets, hooks and shelves. Go/no-go fixtures made by a CNC machine have helped the company speed up its production process and greatly reduce scrap. *Source: Marlin Steel Wire Products LLC*

With the XYZ 5012, engineers download the customer's specifications to the router from the exact print. The mold, or go/no-go fixture, is created from the original print. "We no longer have somebody else reverse engineer it," says Greenblatt. "We used to have the engineer make the print and a fixture maker would make a fixture with a Bridgeport milling machine."

Consequently, with the manual gage-making process no longer in place, the company's aluminum purchases have plummeted. Recycled sawdust, used by the CNC router to create the fixtures, is less expensive and more accurate than aluminum.



Engineers at Marlin discuss making a check fixture to suit a customer's specifications. *Source: Marlin Steel Wire Products LLC*

"It's been a wonderful development," says Greenblatt. "Our tooling department is not at a choke point. We used to beg them to work overtime and weekends, but at the same time, you don't want to sacrifice quality, so it was challenging. Now it's the fastest component of our building."

The CNC machine has not only significantly sped up production, reduced scrap and improved quality, but because of the foolproof go/no-go gages that the machine produces, the company no longer needs highly trained staff checking the orders.

"The check fixtures make it simple for the employee on the factory floor who's not aware of design issues to make sure the part is right the first time," Greenblatt says. In fact, he adds, the manufacturer has reduced scrap so significantly that the company decreased its dumpster size from that of a tractor-trailer to that of a van. In real numbers, the company went from 8,325 pounds of stainless steel scrap in the last quarter of 2008 to an estimated 598 pounds of stainless steel scrap

in the second quarter of 2009.

Another benefit is that the new machine helps Marlin to run as lean as possible. "We buy as much steel as we will make that day so if we have a job where there is a 'boo boo,' we don't have the steel to make that up. We are shooting for no scrap. It's expensive to make mistakes," Greenblatt adds.

"The other benefit is that now that we have so many check fixtures, factory workers at every single operation can confirm the precision between each step of the process. So it's not like we find out at the last step if there is a problem," he says.

With the state of the economy, Greenblatt says that making an investment in the **CNC machine** was an absolute necessity, particularly for a small company such as his, which has approximately 30 employees. He does not see the investment as spending a lot, but rather as saving a lot because the company no longer has to do the rework that accompanied the manual gage-making process.



The CNC machine uses recycled sawdust to create go/no-go fixtures for quality inspections. *Source: Marlin Steel Wire Products LLC*

"Our customers are demanding better quality all the time. So to position ourselves as number one, I needed a method—a tool—so that my employees on the floor could make that happen," he says. "The second reason is that in tough times it kills you to do a job twice because you have to rework it. It is actually cheaper to do it right the first time. It's the old adage: 'measure twice, cut once.'" In this marketplace, every cost savings, scrap reduction and quality improvement gives the company an edge.

Not only have Marlin and its customers benefitted from the timesavings and quality improvements of the CNC investment, but the company also has discovered an added, unexpected benefit. Because of the amount of time available on the **CNC router machine**, Marlin has begun selling its services as a fixture maker. "Now we are starting to make fixtures for other companies. We are so fast at fixturing that we're on the other extreme," says Greenblatt. "It's become a revenue generator."

XYZ Automation Inc.
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Benefits

- Investing in a CNC machine to manufacture go/no-go fixtures for quality inspections has enabled Marlin to not only save time, but also reduce the cost of material and scrap.
- Making a check fixture used to take an engineer four to eight hours. With the CNC machine, Marlin employees can make a check fixture in about 20 minutes.
- The ease of making go/no-go fixtures to a customer's specifications allows the company to check its products along each step in the production process.

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