



Machinist Allen Seals sets up Owens Precision's newest Ganesh Cyclone-32 CS lathe. The lathe features a total of 27-tool stations. The main spindle uses 18-tools, which are comprised of a bank of 4-live cross tools, a bank of 3-axial live tools, 6-turing tool stations, and 5-ID tool stations, all in a gang configuration. Bar feeder is an Edge Technology Rebel multibar feeder.

Adversity Leads to Efficiency

How a Carson City Job Shop Turned Recession Adversity into Advantage.

Story and photos by C. H. Bush, editor

The human race seems to be psychologically designed to believe in inertia. When times are bad, they tend to believe those bad times will go on forever. When times are good, people tend to believe the good times will never end. But like the Chinese proverb says, "This, too, shall pass," and the true test of character comes when decisions are made about how to handle those changes.

"The recent recession tried really hard to take us out," says Walt Owens, founder-president of Carson City, NV's Owens Precision, Inc. turning-machining job shop, employing 65 people and occupying 47,000 sq. ft. in two buildings. "Before the downturn, we had been on a roll, buying equipment, hiring people, growing and making money. When the downturn hit, we were caught with a lot of machine payments, high payroll costs, and severely reduced revenues. The downturn really put our organization and team to the test."

In order to keep his company alive, Owens knew he had

to make some tough decisions, but beyond that, he realized he had to greatly increase his company's efficiency.

Owens founded his company in 1978, starting out in his garage with one used Logan lathe and one used Bridgeport knee mill. In the ensuing years he built that company into a turning powerhouse, serving numerous manufacturers in the area, plus building a variety of components for such companies as Moog Aircraft, Raytheon, Parker Defense Systems and others in the aerospace and defense industries.

"In thirty-two years, I'd seen all kinds of economies," Owens says, "but this downturn really hit us. Still, I had a lot of experience and the will to protect my customers, my employees and my business. I knew what I had to do and did it."

Tough Decisions

What Owens did was make some really tough decisions and some really smart moves.

"Our revenues dipped to less than half of what they had been," he says, "so I had no choice. I laid off more than thirty

Walt Owens, right, and Swiss department lead Tracy Dale discuss a missile component to be run on the Citizen K16 turning center shown in the background.

people in a couple of phases. The first phase eliminated the people who really weren't quite carrying their weight, but the later layoffs cut deep. I was facing people I had known for a long time, people I had given birthday cards to. That was tough."

But as tough as the layoffs were, there was also a silver lining that came out of the process.

"The people we had left were the best," Owens says. "Many of them were capable of running more than one machine, but we hadn't really gone that way very much because we didn't have to. After the layoffs, however, we still needed the production, so we rearranged some equipment into cells and had people running as many as three machines. That increased productivity and efficiency tremendously."

Steps to Increase Efficiency

Owens did more than just having one operator running more than one machine, though.

"We already had a few cells," he says, "but they didn't go all the way. This time around, we completely eliminated the need to move parts around the shop. We set up the cells to do all the ops needed to give us finished parts, parts that were ready to ship. People might wonder why we didn't do it before, but like they say, 'Necessity is the mother of invention.' The downturn created the necessity, and we did the rest."

Owens did other things to improve efficiency, too.

"We talked to Western Tool Supply and Gibson, our tooling vendors, and set up boxes where we tossed used tools into a box," he explains. "When the vendors came in, they checked the box and automatically replaced the worn tools. That eliminated a lot of steps. We also got rid of the traditional tool crib by setting up boxes of tools near each group of machines. The boxes held all the tools those groups needed, and one guy kept the boxes supplied as needed. That way our machine operators could quickly get the tools they needed without a delaying checkout process. The bottom line of these moves was a truly surprising increase in our production."

To further speed decision making, Owens gives his department leads authority to spend money, within limits.

"I have a rule that tells the lead men, 'If you're going to spend up to \$500, and it's going to make me

Machine operator David Dinius uses the retrace wheel on a Ganesh-CS 32 lathe. Rather than simply running a verify program, the wheel can actually step the machine through an entire cycle at whatever speed the operator turns it, a unique Ganesh feature.



money, just do it. Just be prepared to justify what you've done. If you go over \$500 I want to be involved."

Equipment Departmentalized

Owens operates more than 59 CNC machining centers set up in different departments, according to the types of work done. The battery of machines includes 36 standard lathes, 12 mills, including an Enshu horizontal, 4 Tsugami and 3 Citizen Swiss-style machines, and 4 Ganesh Cyclone-32 CS lathes with PC-based controllers,

"We do some horizontal milling," he says, "things like parts of cockpit door locks. The need for those came about after 9/11. But probably 70% of our work is round stuff, which we separate into departments. We have a department that does dual-spindle multiaxis milling and turning, a standard turning department, and a Swiss-style turning department. Each of these departments operates autonomously."





Inspector John Pope approaches a lineup of three of four Ganesh Cyclone-32 CS lathes at Owens Precision.

Owens also has a department dedicated to valve assembly for customers who want him to deliver a turnkey service.

"We divide up our turning according to the part's diameter-to-length ratio," he says. "For bigger parts we run Mori Seiki and Nakamura turning centers. For smaller diameter parts we run Citizen and Tsugamis."

But there's an in-between category of parts that don't require the Swiss machines or the larger lathes.

"Those are parts up to 2" diameter that have a diameter-to-length ratio large enough to turn without the guide bushings," he says, "but they still need the precision and speed of Swiss style machining. To handle those parts, in the past three years I've bought four Ganesh Cyclone-32 CS lathes with dual spindles, 27-tool stations and stackable bar feeders. On these machines the main spindles use 18 tools, which includes 4 live cross tools, a bank of 3-axial live tools, 6-turning tool stations, and 5-ID tool stations, all in a gang configuration. Our guys like these machines because they use PC-based controllers, and they've been real workhorses. We bought the first one three years ago, and so far, they've been totally reliable, no downtime at all."

No Guide Bushing

Owens says he bought the Ganesh machines because of their speed and precision.

"These machines are like Swiss-style machines, but they don't have the guide bushing," he says, "and the head stock moves to the tool rather than the turret moving to the head-stock. The result is our cycle times are much quicker. Tool-to-tool time is much quicker. These machines offer a lot of bang for the dollar, and they have been a perfect fit into our plant. We have to make high-precision parts fast and these machines do that day in and day out."

Recession Boon

Owens now looks back on the economic downturn as a boon to his business.

"We had become complacent," he says. "We were getting work and turning it out, but like a lot of people when times are good, we were ignoring the need for efficiency. The recession changed that. It forced us to look at what we do and how we do it. We pruned the workforce, reorganized the shop and the results have been amazing."

How amazing?

"Our sales have exploded," he says. "In 2010 we were able to ship \$10 million, our best year ever. I'm sorry for the pain it caused so many people, but the truth is, that recession did us a favor, taught us some lessons we won't ever forget."

