
***Roger de la Torre, CNC operator, sets up to run parts for Cisco Systems on PDM's new 4-axis Ganesh 2818 VMC. System work envelope is 70.8" x 80.9" x 99.6" . Work cube is 9938.49 cubic inches. Spindle speed ranges from 60-8,000 rpm.***

# Warlock Blue

## *A Small Machining Job Shop Builds Parts to Keep America Safe.*

*Story and photos by C. H. Bush, editor*

The time was early July 2005. The jet lifted into the skies above Washington, D.C. Very soon afterward, the vice-president of San Jose, CA's Tyco Electronics, Inc., just leaving a successful presentation at the Pentagon, punched in a phone number and placed a call to a small machining job shop in Watsonville, California.

"PDM," answered David Oldemeyer, founder-president of Precision Dynamic Machining, Inc.

"David, get going. We need six prototypes and 10,000 units as soon as possible."

"You got it," says Oldemeyer. He hung up, walked into his small shop and told his employees, "Okay, guys, Warlock Blue is a go. Time to make parts."

### *Warlock Blue*

For those who don't know, Warlock Blue is the code name for a walkie-talkie-sized device that can be worn on the belts of our troops in Iraq and other areas of the world fraught with mad-dog terrorist bombers.

"Warlock Blue is a programmable device that jams the signals from improvised bomb detonators," says Oldemeyer. "It jams cell phones and garage door opener signals, which are the favorite devices used by terrorist bombers to set off IEDs *(improvised explosive devices)*. One report I read says that IEDs are responsible for the vast majority of deaths and casualties suffered by our troops in Iraq and other war theaters. My understanding is that Warlock Blue has saved a lot of lives since deliveries began. It makes us very proud to have been part of the project. I'm proud of our employees, too, because they all pitched in and worked long hours to meet the deadlines."

### *Crushing Deadline*

According to Oldemeyer, a different prime contractor originally had the contract produce the Warlock Blue jammers.

*Brenda Oldemeyer (left) and David discussa new a project just in from Cisco systems. The project arrived by email. In the background is a new Ganesh VMC recently purchased from Shenk Machinery.*

"Problem was they wanted a year lead time for delivery," he says. "With our men dying over there, that wasn't good enough. The Pentagon wanted something that worked yesterday. To get the contract, Tyco had to prove they could go from concept to finished machining in 24 hours, and we did it. We were part of that effort, and we succeeded."

Oldemeyer's company machined the housing for the initial prototype that was presented to the Pentagon.

"Once Tyco had the contract, we made the full housing for six more units," he recalls. "After that the chassis was subbed out to be produced by a shop with large automated horizontals. We didn't get that part of the production because we didn't have the right machines to do them. What we did get was the job to produce 10,000 chassis covers and all the divider ribs used to separate the internal electronics. My whole shop rallied to meet the schedule. We worked 24/7 until the job was done."

When the smoke cleared, Precision Dynamics received an award from Tyco for a job well done.

"The title of the award document was *Protecting the War Fighter by Defeating IEDs,"* Oldemeyer says. "Knowing we can play even a small role in helping protect our troops is one of the reasons I've keep our company in the defense industry."

## History in Defense

How did a small machining job shop with 6 employees and 8 VMCs working in a 3300 sq ft facility become involved in such an important project?

"That's what we've always done," says Oldemeyer. "Before I started PDM, I spent almost twenty years working for a large semiconductor/defense company. I was the supervisor of a one-hundred-man machine shop doing work for both the semiconductor and the defense sides of the business. Virtually everything we did was defense related. Then, about ten years ago, the company started laying off ten to fifteen people a week without asking me who should stay and who should go, so I resigned. I told them that I didn't like the way they were treating people, so I basically laid myself off."

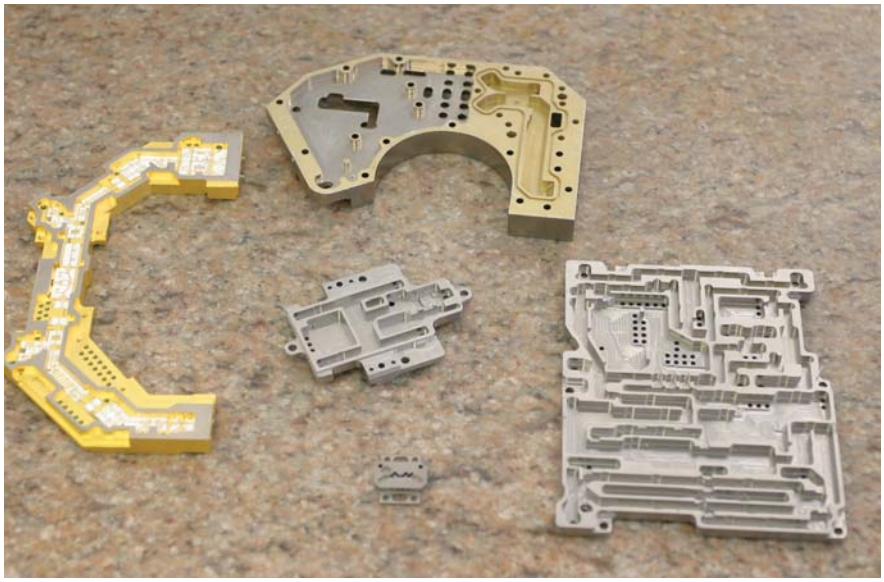
Oldemeyer didn't just quit and wander off into the sunset, however. He took three employees with him and immediately formed Precision Dynamic Machine, Inc.

"I went back to the company and bought three machines from them," he says. "I offered them $50,000 for the machines and they took it. I told them since they had laid off so many people, they wouldn't need them anymore and they agreed. In a week and a half we moved into this facility, which already had the power we needed and a compressor. In 2-1/2 weeks we were making parts."

## Customer Came in the Package

Oldemeyer got one lucky break to start—a good customer who needed his know-how and services.

"For six months before I left that company, the machine shop had been spun off as a profit center serving both the defense and semiconductor division," he says. "When we left, the defense people had nowhere handy to



***Typical parts produced by Precision Dynamic Machine. On the left is an RF module made of gold-plated and ground Carpenter 49. The top part is an aluminum chassis, plated with nickel and alodine. The righthand part is made of Kovar for use in RF jamming. The middle part is missile component made of Carpenter 49. The small piece on the bottom is made of titanium for a commercial product.***


***Closeup of a 6061 aluminum part produced for Cisco Systems. The part is a battery cover for the next generation of wireless internet transmission.***

go for parts, I told the guys, 'Hey, I'm starting a business. Why don't you let us do your work for you?' They said, 'Great!' so we had our first customer, doing things we knew inside and out. We've done well every since."

## Conservative Business Approach

Over the years Oldemeyer's company has stayed small, but profitable.

"I'm a very conservative guy," he says. "I'm not interested in building a big shop with fifty or sixty people. We've been in business ten years now, and when I make a move, I think it though first. I make changes in small, incremental steps. I don't really want to have an impersonal relationship with my customers. I want to know them, and I want them to know us. I really want to be their partner who will break his back for them in a pinch and be fairly rewarded for doing so. If I tell them they'll have their parts on Tuesday, they'll be there Tuesday. Also, I want to make the people who work here happy so they'll stay. We try to make their lives better. We have really good people, who like working here and living in this area."

At present Precision Dynamic machine still has about 70% of its sales in the defense industry, Oldemeyer reports.

"We build parts for the AMRAM and Hellfire missiles," he says. "We do work for Cisco Systems who make most of the routers worldwide. Then we do work for some semiconductor companies, and we're producing casings for the next generation of wireless. If I had my pick of new customers, I'd probably choose people in the medical devices industry. We machine all the materials they use, and we produce the superfine finishes they need. We'd be a perfect match for someone in that industry."

Oldemeyer's conservative approach overflows into his choice of shop equipment, too.

"My customers want high-quality, precision parts with fine finishes," he says, "so any equipment I buy has to be able to deliver all those things with a high degree of repeatability. And, because we're small, I need reliability and good service to back up the machines. But I also need equipment I can afford to buy without going into debt. We have an Okuma MC3VA VMC, six 10,000-rpm Excel VMCs and we recently purchased a Ganesh VMC 2818 machining center from Ken Rule at Shenk Machinery. Ken originally sold me the Excel's, so when I went looking for another machine, I called him. He knew I needed the maximum bang for the buck, so he introduced me to the Ganesh, and I'm glad I did. The system has 24-tool capacity, and it's built with boxways, so it's really rigid."

Oldemeyer says he bought the Ganesh to do a new job for Cisco Systems.

"On one of my older machines, the job was taking fifty minutes to complete," he says. "On the Ganesh, it's down to fourteen minutes. With a little experimentation, we were able to take one-inch deep cuts at 25" a minute in stainless. It was amazing. I mean this machine with the box ways really has what it takes. Plus, of course, Shenk Machinery gives me really good service. A good machine without good service just doesn't cut it."

## Future Remains Defense

Oldemeyer is pretty adamant about keeping his company small and friendly.

"I like doing work for the defense industry," he says. "And, even though I may branch out to do work for the medical device industry, I'll stay in defense. I mean, where else can you do work that has such direct impact on our country's safety? If another opportunity like Warlock Blue comes along, you won't be able to hold us back." ■