



Revolutionary Micro Workholding System with Tighter Grip and Greater Accuracy allowing Manufacturers to Produce Micro-Precision Products on their CNC Machines



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CEOCFO: Mr. Saccomanno, what is the idea at Masa Tool, Inc? What is your Microconic™ Workholding System?

Mr. Saccomanno: Masa Tool is basically formed from our life experience in the machining of micro-precision parts; primarily on Swiss-type screw machines, although the real focus is for high precision small parts manufacturing on any machine type – to better the world of micro machining. Specifically, our first major product release is the Microconic line, as you mentioned. Microconic is a high precision, collet-type workholding system that fits in conventional machine tools of all types. It provides extremely precise, extremely rigid and also very easy to use workholding for the manufacturing of micro precision products.

CEOCFO: What are you replacing or enhancing? What are people doing now?

Mr. Saccomanno: We are replacing an existing collet design. A collet is a traditional workholding device. It is like a split sleeve that has a taper on it and it slides into another tapered receptacle. It clamps down on the work piece and traditionally has been the most precise and rigid way to hold small work pieces for production machining. The most widely used collet system design was invented about a hundred years ago. It has essentially been used to this day with very little improvement until now. The Microconic system was created to resolve many of the limitations of existing legacy systems. The neat thing about Microconic is that we fit directly into the existing legacy workholding system, so that it is an advanced, self contained workholding unit that fits within what is already in the machine. Therefore, the customer does not have to modify their machine or anything. They can install our product right inside their existing spindle. Then we provide improved accuracy, repeatability, adjustability, consistency, rigidity and everything in every way. There are quite a few different ways that we improved the state of the art.

CEOCFO: Have manufacturers been looking for a better way or is it once they find Microconic they are excited?

Mr. Saccomanno: That is a great question! There is excitement when they see what we have, but it is not an easy sell at first. That is because, as you say, it is hard to look for something that you do not know exists. That has been a big part of our marketing hurdle to get over; to distinguish ourselves from the systems that are out there. To answer your question it is both a yes and a no answer. Yes, people have been looking for something else. There are pervasive complaints throughout the industry about the quality of existing systems and the availability and the consistency. Those are just like part of the landscape. They have been around for years. Everyone is kind of used to dealing with it and they are always trying to find better sources to get better collets and things like that. On the flip side, because people are so used to dealing with that, they do not really anticipate the revolutionary change that you can get by all of the benefits of the Microconic system. Therefore, it takes a skilled technical person to really talk to the customers specifically about what they can do with their own applications. The cost of Microconic is not trivial, so it is important to show how the value is created by providing capabilities to significantly improve productivity over what can be done with traditional legacy collets.

CEOCFO: *How do you get a foot in the door to present what you created? How will you in the future?*

Mr. Saccomanno: That is a good question, too. For many years I did this as a sideline business. I know many people locally who have manufacturing businesses that can use our products. Of course, I would make a personal connection and I understood their applications. That is the best way to get their attention, to actually speak to a specific product they are making, a specific application issue they are having, and show how we can improve that particular application. As far as getting those broader messages across, it has been a real learning curve for us! That has been a limiting factor in our early growth: The marketing and sales side. We are all engineers and manufacturing people, as all three of the current partners have our entire careers in manufacturing. We are not marketing people. Luckily, we were able to connect with a very capable marketing expert by the name of Bernie Martin who handles all of our marketing. He set up a professional agent network for us and we are selling to qualified distributors that can offer technical support to the customers. We are now focusing on educating our representatives and our dealers and distributors, so that they can approach the customers in the specific way that they need to understand how we can benefit their productivity.

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CEOCFO: *Would a company need twenty, one hundred or one thousand of these at different points in the assembly line or different points in a machine? Would you give us some guidelines to go by?*

Mr. Saccomanno: I will give you a very good example of a very common customer for us. That is the orthopedic industry and especially customers that made orthopedic bone screws. Bone screws are basically used to repair bones if they have any kind of a break or anything like that. You hear that people get pins in their wrists and their arms after they break their arm or you hear of people that have surgery in their shoulder and they may need bone screws to reattach tendons and things like that. Those bone screws are generally precision machined out of titanium alloy bar stock. The raw stock is basically a long rod of titanium that is generally about twelve feet long. It is machined in a Swiss type screw machine, which is a very specific type of CNC machine that was originally perfected in Switzerland to make high precision watch parts back in the mid-1900's but now made by Japanese and many other companies too.

Now, there are billions of people, and lots of them get broken bones, so the bone screw industry is a massive industry. There are companies making bone screws that have hundreds of these Swiss type CNC screw machines. We will sell a Microconic system to fit in each of those machines, which allows the customer to complete more of the operations on the machine with better accuracy and less downtime and less troubleshooting needed. That provides them the benefit of being able to use people that maybe are not as expert. That is always a problem; finding expert people to run these screw machines. It is a common misconception about CNC (Computer Numeric Control), that computerized machines are out there making parts completely automatically and it is really not true. These machines are just sophisticated tools that a skilled operator or machinist will use to make parts, and we still need that skilled person to monitor and especially to determine the machining strategies and to troubleshoot any issues. It is always tough to find enough skilled people. A lot of skill is required to set up and adjust the clamping of a precise, fragile work piece. With Microconic everything is graduated and controlled and calibrated. Therefore, you can determine the precise fit needed, and even the new guy on the night shift can repeat that setting with accuracy. It does not rely on feel or experience or anything like that. Therefore, we help open up and reduce the skill level in that aspect of set up.

CEOCFO: *It is getting harder and harder to find people in manufacturing that know what they are doing. Are there certain either industries or certain areas that you particularly address that are getting more attention than others?*

Mr. Saccomanno: Certainly, the medical device industry is a top customer for us, due to the need for precision and miniaturization. The electronics industry, especially connectors and precision contacts and such, use our technology quite a bit; also micro fluidics, which would be small hydraulic systems, specialized fittings and precision orifices and things like that. In the automotive industry many of the modern sensors and electro mechanical devices, mechatronic devices; many of them use micro-machined components that benefit from Microconic systems. It really varies. There is an amazing variety of stuff. We have also been assisting with the manufacture of some aerospace components for space craft and such.

CEOCFO: *Why are you ready now to make a bigger push into people understanding what you are doing and paying attention? Why is this the time?*

Mr. Saccomanno: I personally did it on the sidelines for many, many years as a sole proprietor ship, kind of as a side job. I invented concepts that created the system a while ago. We got an early patent and then another patent issued recently

and more to come. However, we got serious in 2011. One partner, Dragan Marjanovic has always been with me as a precision grinding expert. Precision grinding is the key to accuracy in our system. It has been absolutely vital and his knowledge and experience and creativity have been an integral part. I credit him with being a really big factor in helping me develop this system. It would not have happened without Dragan. He was with me from the beginning and has actually been involved with doing all the grinding for every unit that we have ever made. In 2011 he basically came to me and said, "Matt, you have got to do something with this. This sideline stuff is just not going to cut it! You have got to get this out there." Therefore, through Dragan's efforts he actually found two investment partners and we incorporated in 2011 as Masa Tool, Inc. We worked for many years developing the latest version, which is now the Microconic cartridge and Microconic collets. That was a big development curve. It took years longer than we thought it would initially. The two investor partners basically got a little tired of waiting and wanted to cash out of the business. I was fortunate enough that my lifelong good friend Chip Prescott, who is our now third partner, was able to buy out the shares of the other two investor partners. Now the three shareholders are myself, Dragan and Chip Prescott. I could not ask for better partners! Chip grew up in the screw machine industry. I started in 1977 working at his parent's machine shop, which was Allied Swiss Screw Products. His father Wade Prescott and mother Bonnie Prescott owned that shop. Working there over 20 years is how I got to know Chip. He had started another highly successful shop and recently sold it, so he had the cash to be able to buy into Masa Tool. We are completely self funded.

CEOCFO: *Do you want to continue that way or are you seeking investment?*

Mr. Saccomanno: I think right now it works for us. It is good for us. In this industry it is difficult to grow because of the precision level and the skill level that is required. Therefore, we want to have very managed growth and I think that self funding is working for that right now. We are not ready to make a huge incremental jump as of yet, but I would not rule out something different in the fairly near future. However, right now it is working great for us.

CEOCFO: *Why should people be excited about Masa Tool and Microconic?*

Mr. Saccomanno: I will explain it to you this way. These CNC machines cost maybe a quarter of a million dollars or upwards when you count all the tooling and everything, and they require a highly skilled person to operate and a lot of support staff for tooling and things like that. Therefore, they are very expensive investments. Each of these machines has what they call a main spindle and a sub spindle. You basically machine the part out of a rod of material held in the main spindle. You machine one end of the part, then you grab that end with the sub spindle and you cut it off from the bar and then you machine the "back" end in the sub spindle. Therefore, there are essentially two spindles on the machine to make a complete part. These two spindles work independently. Because of the limitations of legacy workholding, what could be done in the sub spindle, that second spindle, has been very limited. That is because they could not grip the part rigidly enough or it was damaging the part or the concentricity of the part was off center in the collet and things like that. Therefore, they did very little in the sub spindle. On these very expensive machines you have two spindles, but one of them is sitting idle, maybe ninety percent of the time. That is a big waste, almost half a machine going to waste. It is a big investment and your skilled person is managing half a machine that is not even doing anything. Not to mention that traditional workholding created all sorts of problems that required troubleshooting and a higher skill level of operating. Therefore, at Microconic we take care of those problems. We guarantee two ten thousandths of an inch concentricity on all of our products. We provide micrometer adjust closure. We provide rigidity and extended nose in a way that allows them to fundamentally change the way they run the product. It now shifts the operations from the main spindle to the sub spindle. What does that mean? Let us say it takes four minutes to machine a part. The main and the sub spindle work at the same time. The main spindle generally takes much longer. They do most of the machining on the main spindle and then they grab it in that sub spindle and cut it off and then do the back end. If you can shift more of those operations to the back spindle it subtracts from the overall cycle time, because it is what they call shaded time. It is done while the main spindle is working. Therefore, on a four minute cycle, if you can shift one minute of machining time to the sub spindle that you could not do previously, you just reduced your cycle time by twenty five percent and you just boosted your productivity. It makes such a difference because no one can compete with you if you have our system. In many cases there are certain products that, because they can shift all of these operations to the sub spindle they can essentially make it thirty percent, forty percent, sometimes up to fifty percent faster than any competing person using the old traditional methods. Therefore, in that respect you are now using your sub spindle and all that idle time is being converted to productive time. Essentially, you just expanded your machine capacity and you also just boosted your productivity. The Microconic system is an investment in the beginning, but it is a very small investment as machine investments go. After that you now have a much more capable machine. That is the exciting part; putting the sub spindle to use and being able to make products faster and much more competitively than can be done with legacy systems.