

## Engineered Solutions for Motion Products – Gear and Transmission Device Products



**Robert Kufner**  
President and CEO  
Designatronics Inc.

**CEOCFO:** *Mr. Kufner, Designatronics has a long history. What is the focus for the company today?*

**Mr. Kufner:** Our tag line is, “Engineered Solutions for a World in Motion.” That really is what we are about. Traditionally, we have sold gears and pulleys, but now we really are about working and collaborating with our customers to use our products to drive an engineered solution for their need. We do more than just supply parts, we have found it really incumbent upon us to help with going beyond that. That is what customers most need. They do not always know how to put a gear together with a shaft or even what belt to pick for a pulley or a subsequent part to go along with what they are looking for out of our catalog, so we provide those services all the way around. The focus is to leverage our growth off of that and we are growing. We are moving into a new building here within the next year. We are on track for being and continuing to be; as a matter of fact we are, the leader in the gear and transmission device products that are in our size range.

**CEOCFO:** *Do customers need more help because there are so many more products, because technology is advanced or because people are less knowledgeable?*

**Mr. Kufner:** I would not say less knowledgeable. However, and I am sure that most companies are like this, companies become flatter. Therefore, there is much more required of the technicians and engineers that are actually building products to know more. Gear design and pulleys and transmissions and things that we sell in our catalog; there is a myriad of knowledge and background you would have to have just to understand how to select the proper products in the first place. However, for someone who is building an entire automated system or plugging our products into, say, a robotic device, which is very common for our uses; 3D printers as another example, they do not know all of the things that they would need to know to be able to select the right products for the durability and longevity of the system that they are making or designing. That is where we come in. That is the void that we fill. It is not an education void. It is not a matter of one person being smarter than the other or “we are smarter than our customers.” That is not the case. What the customer is looking for is a much larger system, usually with many different components and our job is to help them in selecting the right ones for their design.

**CEOCFO:** *Are you typically working with the end user of the product? Are you working with systems integrators?*

**Mr. Kufner:** Both. We have so many different part numbers. We have about 300,000 SKUs and those products can be used by a guy tinkering in his garage and designing something from scratch, to an OEM that is manufacturing, for instance, 3D printers. We supply gears and pulleys to the 3D printer market en masse. We are delivering twenty, fifty, one hundred thousand units annually. We deliver to an entire horizontal market, as we call it, rather than a vertical market. We do support some vertical markets. The 3D printer market, the drones and aerospace market and med device market; they seem to be a larger vertical market of consumer, but by and large most of our stock products go to a wide array of different companies.

**CEOCFO:** *For people who do not think much about gears and pulleys, would you give us an idea of some of the nuances?*

**Mr. Kufner:** It is pretty complicated, even for engineers who have a formal engineering degree. This can be a very complicated market. Some of the things that are not generally known when picking a gear are its durability and the primary things that you are looking for in order to sustain that durability. As you had mentioned, if someone is looking for a specific torque they are going to need a specific number of teeth and size of teeth on the gear. We call those number of

teeth on a specified diameter, the pitch. The selection of the diameter and pitch drive the size of the teeth that they are going to be selecting and then the pressure angle, which is the angle under which the teeth are cut so there is an adequate amount of tooth surface that one tooth engages with its mating part. That is at a very high level. Beyond that you start to get into the selection of the width of the gear, which can be very thin or very wide to handle a required amount of torque. Finally, the bore of the gear can be selected, which is the size of the inside of the hole on the gear that it slides on to its shaft with.

**CEOCFO: When you are helping a customer design or when you are looking at an end product is it mathematical computations? Do you test different thicknesses? How do you come up with a solution when there seem so many possibilities?**

**Mr. Kufner:** There are many automated tools that we have now. There is software that we have that can actually be accessed on our website to select some of those dimensions. We also have in our catalogs basically an encyclopedia of mathematical computations that make it easier for an engineer to make those selections. We have made it easy to drive an engineer in the direction of what they want and use those computations to select their parts. We are actually taking that a bit further on our website. We are developing things that you simply put in the inputs and the sizes of the things that you need as far as space and torque and we can recommend that for you very automatically on our website. Typically, how that is done is that you give your engineers a scope of what the work space is and how much torque you are driving and the direction that the torque needs to go and our engineers will figure that out for you very quickly.

**“Our products go into end products that save peoples’ lives, and that is important to us.”- Robert Kufner**

**CEOCFO: Do you need to maintain inventory? Do you manufacture some of the parts that you are using?**

**Mr. Kufner:** Yes, Typically in our business, we have to maintain an enormous amount of inventory. I cannot really give you a ratio, but we are commonly stocking at least one type of product in a product family across every product in our catalog. Therefore, we may not always have the exact size that someone needs, but when we do not, we give a lead time on when we can have the product delivered. However, there are also cases where we keep a large inventory of blanks where we can have the general shape of the gear and then have it cut very quickly within a few weeks as opposed to a longer lead time, which could be eight to ten weeks to have a part made from scratch. Usually; and we have done a very good job of this, we use the 80/20 rule to make sure that we have the highest volume of parts that typically move in and out of our warehouse, on the shelf. We focus on understanding very, very clearly what parts are moving and at the highest volume through our warehouse. We manufacture seventy percent of our products and purchase thirty percent of our products. Therefore, we are highly leveraging our manufacturing process. It also gives us a great deal of flexibility to be able to make things for people that do not necessarily find exactly what they need in our catalog. Therefore, we can make modifications on stock items fairly quickly. Additionally, we will be going to market soon with solution to situations where a customer cannot find something in our catalog that they need immediately. We will be providing a service using 3D printed metal suppliers to start with, that we can supply customers a metal gear 3D printed in just under two weeks. That has not been done in our industry as of yet.

**CEOCFO: Where do you manufacture?**

**Mr. Kufner:** Right here in New York. We have four addresses. We have sixty thousand square feet of manufacturing facility here in New Hyde Park. I can tell you that we are starting construction on a new facility in Hicksville to consolidate all four of our current addresses to gain some advantages and reduce our lead time and improve the amount of collaboration and communication we have amongst our departments. That building is one hundred thousand square feet, so we have room to grow.

**CEOCFO: Would you address manufacturing in the United States. What do you understand that perhaps others do not?**

**Mr. Kufner:** I have spoken to other reporters about the reshoring process. We are capitalizing on that, because many of our customers have found that going to the low cost regions to find products is not always the answer. That is because they cannot get the level of quality and repeated quality within off shore products, part after part, that we provide. Therefore, if they go to China, and this has happened many times, and try and get a product that is similar to ours, some folks have success with that but most of them do not. That is because of product consistency; the consistency and quality part after part that comes from our process. We have a world class quality rating. We have a defect rate, right now, that is below a half a percent on all of our stock parts. Therefore, that confidence that we give our customers is what they come back to us for. We have had several situations where customers have gone to China and sourced products that we had helped them design. We have found repeatedly that they come back to us because they cannot get the delivery or the quality that they enjoyed with us.

**CEO CFO: Are you surprised that it has taken people so long to understand that?**

**Mr. Kufner:** No. Trial and error, I think; once someone is committed to a path sometimes, they will do whatever it takes to try and make it work. However, it really comes down to a cost benefit situation. Yes, you are going to pay a little more for our product, but you are going to get a better product. However, at the same time we are going to make commitments to our customers to cost down that product over time. One of the things that Designatronics, specifically with our brand SDP/SI (Stock Drive Products/Sterling Instruments), we are continuing to automate. We have a staff of engineers here that work on moving many of our products from what could be considered a manual gear cutting process to a CNC process. The CNC process gives us the additional advantage of taking some of the secondary processes out of the product itself, such as deburring and surface finishing. That is critical, because the reduction of processes continues to drop our overall cost and overhead so that we can pass savings on to our customers. The less you touch a part, the less labor you invest in the part and you lessen the opportunity for defects driven by your process. That is one of the things that we are highly focused on here; automation.

**CEO CFO: How do you attract the talent and the people with commitment and skills you need, both on the manufacturing and on the engineering level?**

**Mr. Kufner:** It starts out with a good culture. Much of the attraction and retention that we have comes by word of mouth. The manufacturing industry here on Long Island specifically; it is a closer group just because so much manufacturing has been replaced by banking and the service industries. Therefore, a lot of folks know us. Our reputation comes from word of mouth from our employees. However, for attracting and retaining the highly technical machinists' and engineers; we have a long standing history of stability within the company. We are a financially stable company. I think that means a lot to people. Additionally, the staff and the history of the products that we make; although they are not necessarily sexy products when they stand on their own, are pretty interesting just because of the things that they go into. We have a very wide array of customers. However, some of the things that we make are very, very highly specialized. We have products that have gone into the Mars Rovers. We have gear boxes that go into Boeing satellites that orbit the earth. We also have a great deal of military products too that our products go into. We make a connection between the products that we make and share with our employees what those things do and how they affect peoples' lives, particularly on the med device side. Our products go into end products that save peoples' lives, and that is important to us.

**CEO CFO: What is ahead for Designatronics?**

**Mr. Kufner:** We see a consolidation in the industry. It is becoming more technical. A lighter product will probably be the requirement as far as lighter materials in things like drones and 3D printers. Things will become smaller and we are well positioned for that. We go into the miniature sized products. We are big on miniature products as far as gears and bearings and transmission products. Therefore, we think that will be a large part of our growth. As I said, we have a new building that we intend on filling up with new machinery and new technologies to be able to produce our products faster and cheaper, but with maintaining the same quality.

**CEO CFO: How do you know when you are looking at new technologies and new ideas, for example 3D printing? Can you assess early on that that is going to get traction?**

**Mr. Kufner:** No. We do not. We monitor the new technologies like 3D printing. That specifically, is something that we have watched very, very closely over the last five years to see how it would affect the market. Fortunately, we did not get in it early. The tolerances of what 3D printers were capable of was not exactly special early on. However, they certainly have come a long way over the last five years. The ability for them to process parts to higher tolerances, not just because of the products that are going into these machines to make the 3D printed products like our gears, as an example. Customers have figured out how to make those gears, through us, smaller and cheaper and with more precision, so that the programming that folks are using to drive these 3D printers can be tighter as well. Therefore, that process has moved very quickly. We have decided that it is important for us, early on, to watch a technology and see how it affects both us and our customers and then dive in, rather than being the first to market with it.

**CEO CFO: Do you see acquisitions or have you done acquisitions in the past?**

**Mr. Kufner:** Yes. We see a big opportunity for growth in that for us.

**CEO CFO: Why choose Designatronics?**

**Mr. Kufner:** Why choose Designatronics? It is pretty simple. We have always been the leader in our size of products that we supply. This company was created and run by engineers and is still run by engineers to this day. I am one and many of my staff on both the sales / engineering side and the operations side are engineers. We know very clearly the challenges that affect our customers every day. Many of us have lived through those challenges working other positions in other roles with other companies. Therefore, we do know how to help our customers find engineered solutions for their world and for their needs and that is why they should choose us, because we can identify with them very quickly.

# ***Designatronics*** INC.

**For more information visit:  
[www.designatronics.com](http://www.designatronics.com)**

**Contact:  
Robert Kufner  
(516) 302-0102  
[Rkufner@Designatronics.com](mailto:Rkufner@Designatronics.com)**