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# CT JEWISH Ledger

## Dreidel, Dreidel, Dreidel, I made it out of...titanium?



Horst Engineering creates limited-edition dreidels out of aircraft grade materials

By Stacey Dresner

Horst Engineering in East Hartford manufactures high-precision metal hardware components for global clients like the Collins aerospace division of Raytheon and General Electric Aviation.



HORST CEO Scott Livingstone shows off the Horst dreidel.

The company manufactures bolts, screws, studs, tie rods, nuts – among many other products – using materials like aluminum, stainless steel, titanium, and high temperature alloys and polymers. Horst parts can be found in a variety of aircraft systems in commercial aircraft flown every day.

The multi-million dollar company's slogan is "We Lift You Up."

Now Horst Engineering has diversified, using its premium materials to manufacture another sleek, high-tech, precision metal product – The Horst Dreidel.

The limited edition Horst Dreidel comes in aluminum, stainless steel or titanium, and is offered in three colors: blue, orange and gold. Each comes in a carrying pouch with a serial numbered certificate of conformance.

Horst's website even has its own "dreidel" page, with videos explaining the history of the dreidel and how to play dreidel, as well as a recording of "The Dreidel Song" with written lyrics.

The company first made a batch of dreidels three years ago as a giveaway at a Horst Family Day – an event held every three years for employees and their families.

But now, as the coronavirus has grounded much of the commercial airline industry, Horst CEO Scott Livingston says that making dreidels has kept some of Horst's idle machines busy.

"We do a large amount of defense business but we do an even larger amount of commercial airspace business and that is where the pain is being felt right now," he told the Ledger. "We definitely have a little bit more capacity than we have had in the past few years. We didn't have the time to do this up until February or March, so, yeah now there's a little bit of machine time."

Three months ago the company began churning out several hundred of the colorful Horst dreidels.

"This project could easily become a distraction when we have so many other worries going on," Livingston said, "but it was a fun little project to do in a year where we could use a little joy."

## **A design challenge**

Over the years, Horst has designed and manufactured a number of small products to give away at its fun-filled Family Day events. Livingston says these aren't just gifts, they are also a way to showcase what the company does.

As he was giving family members tours of the factory and its machinery, Livingston had realized that it wasn't easy for the children to understand all of the ins and outs of manufacturing Horst's small metal components.

"So we challenged our team from the first time we did one of these events to develop a product that kids can really identify with," Livingston says. "Over the years we've done key chains, yo-yos, golf ball tees, little model airplanes, and tops. And then we said, 'Well, tops are cool but how about a dreidel?'"

Those first dreidels were made in 2017 with materials and machinery that the company already uses.



Horst dreidel pouch & certificate

“We were demonstrating our processes, so the original design was an aircraft grade aluminum body with an aircraft grade stainless steel stem. And we wanted a two-piece design, so that way we could actually demonstrate more steps in the process...by making two pieces they were kind of modular and interchangeable, and we were able to demonstrate more of the steps.

“The aluminum body is made on what we call a Swiss screw machine,” Livingston explains. “If you are familiar with fine watches, the Swiss are the best. And they became so good they built their own machines to build their tiny watch parts. These Swiss screw machines can be used to make all different types of components, including aerospace components.”

The “Swiss” screw machines Horst uses now were made by a Japanese company, which has designed computer numerical control screw machines.

“So our dreidels are made on a Japanese Swiss screw machine – very high tech,” he said. “The stem is made on a different screw machine. It’s ‘thread-rolled; we roll the [metal] thread, which is high strength. We form the thread and roll the knurl, which is the little diamond pattern for the grip. You never want your dreidel to slip out of your fingers, right? How many times do you use a cheap dreidel and it slips out of your finger? Well, the knurl on this dreidel is surgical quality. It’s the same equipment we use for surgical instruments. The beauty of it is that we have all this capability and it is such a wonderful way to demonstrate it.”

Everyone at Horst’s 2017 family day event got one of their dreidels and they were a big hit.

“Of all the ideas we’ve had over the years for these family day events, the dreidel was the first one that I wanted to offer [for sale to the public]. Because people saw pictures of them and said, ‘That is beautiful, how do I get one of those?’ I said, ‘Well, you’ve got to come work at Horst Engineering.’”

## **A long legacy**

Horst Engineering was founded in 1946 by Scott Livingston’s grandfather Harry.

Born Horst Rolf Liebenstein in Bad Liebenstein – a spa town in Germany – he graduated from the Technische Universität Ilmenau with a master’s degree in mechanical engineering.

While studying, Horst also worked at several factory jobs, including an apprenticeship at a bicycle factory. There he learned skills like metalworking and tool and die.

After getting his degree in 1935, Horst worked at a company manufacturing stationary bicycles and treadmills and calisthenics equipment for the local spa industry. He worked there for three years until things got so bad for the Jews that he knew he had to leave Germany. Horst's two brothers had already left for Africa and were encouraging him to get out.

"His employer was sympathetic and ultimately helped him get to the Netherlands to get a boat in Rotterdam," Scott Livingston says.

Horst's parents, who owned a grocery store in Bad Liebenstein, would not leave and perished during the war.



The passport Horst founder Harry Livingston used to leave Nazi Germany in September 1938 is among the Livingston family mementos that sit in a display case in the offices of Horst Engineering.

At 26, Horst made it to the United States where he was sponsored by cousins who had changed their last name from Liebenstein to Livingston.

So Horst Liebenstein became Harry Livingston.

“Ultimately he was able to make his way to Hartford in 1940 to seek industry, because this was a boomtown,” says Scott Livingston.

Harry married Sylvia Hurwitz, a Hartford native, and worked for a variety of companies in the Hartford area, including Whitney Chain Company, Johns-Hartford Tool Company, and Colts Manufacturing Company. Between 1940 and 1946 he learned different parts of the manufacturing trade before leaving to start his own business.

Harry founded Horst Engineering and Manufacturing Co. in 1946 opening up a shop in the rented second floor of a barn on Garden Street in Hartford. In 1950, with support from a great-uncle, Harry built the plant in East Hartford where it still stands today. In its early days, Horst Engineering specialized in making small parts for a broad range of industries.

In the 1960s and 1970s, under the leadership of Harry’s two sons, Stanley and Steven, the company acquired several other firms and began to specialize in the aerospace parts industry.

Next year Horst will celebrate its 75th anniversary by moving its 115 employees into a new, larger headquarters two miles away on Prestige Park Road in East Hartford.

“That will be a huge year. You’re not talking about generational transition you’re talking about a multi-generational transition. The company has evolved over the generations,” adds Livingston. “Today we make fasteners, including bolts, screws, tie rods, pins. We make specialized aircraft clevis pins. We make bodies bushings and sleeves, all



different types of small super precision aerospace components that go into aircraft engines, cabin pressure systems, propeller systems, fuel controls, landing gear.

The company also makes specialized metal parts for the bicycling industry – a connection to Harry’s time apprenticing for a bike factory in Germany in the 1920s. “A passion for cycling is in our roots,” Livingston says.

Now the Horst Dreidel – which includes the newer models with stainless steel and titanium bodies – can be found on the “Shop” page of Horst’s website, along with their patented “cross spikes” made for bicycle shoes.

“So we have the ability sell accessories or little items,” Livingston said, “and the dreidel is now another item in that shop,” although there are limited quantities.

Horst only created 384 of the aluminum dreidels, which sell for \$54; 58 of the stainless steel dreidels at \$58; and 56 of the titanium dreidels, selling for \$72.

“Let’s put it this way,” Livingston jokes, “It isn’t going to pay for the new factory.”