

## DA VINCI® ROBOTIC SURGICAL SYSTEM RELIES ON SWISS PRECISION

**Key to winning the business: follow the golden rules of customer service**

Ask questions. Listen to customer needs. Deliver quality product. Stand by your product. These are the golden rules of good customer service. And these are the reasons that Intuitive Surgical Surgical of Sunnyvale, California, manufacturer of the revolu-

tionary da Vinci® Surgical System, chooses to partner with Swiss Precision Machining, Inc., a Swiss-style machine shop based halfway across the country in Niles, Illinois. In fact Swiss Precision recently attended a Top 20 Supplier Summit at Intuitive Surgical in California.





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The parts that Swiss Precision manufactures are used in the robotic hands of the da Vinci® Surgical System and are critical to its accuracy and overall operation. Swiss Precision is a member of an elite group of companies making parts for the da Vinci® Surgical System – many of whom are Tornos' customers. Tornos works with many of the major medical suppliers worldwide and is pleased to be able to share this story with **deco**magazine.

#### **What is the da Vinci® Surgical System?**

Introduced in 1999, the da Vinci® Surgical System is being heralded as the future of surgery – it's the most advanced platform for minimally invasive surgery today – and it's re-writing accepted standards for surgical care. And, as it happens, many of the parts that are key to the system's operation are Swiss type components!



*"So I went out and bought an autoclave and we do the testing here. And that's what I think is the most important thing – to not only match what your customer is doing, but exceed what he's doing." Mike Haupers, Swiss Precision Machining Inc.*



The da Vinci® Surgical System provides surgeons with an alternative to both traditional open surgery and conventional laparoscopy. It puts a surgeon's hands at the controls of a state-of-the-art robotic platform enabling him or her to perform even the most complex and delicate procedures through very small incisions with unmatched precision.

**For the da Vinci® Surgical System patient, benefits may include:**

- Significantly less pain.
- Less blood loss.
- Less scarring.
- Shorter recovery time.
- A faster return to normal daily activities.
- And in many cases, better clinical outcomes.

For example, to perform a prostatectomy to remove cancerous cells in a patient, just five dime-size holes are made in the abdomen instead of the traditional large incision that runs from navel to pubic bone. The patient is ready to go home the next day after the da Vinci® Surgical System surgery. The da Vinci® Surgical System is quickly becoming the preferred protocol for urological surgeries for prostate cancer, bladder cancer, and kidney disorders as well as surgeries for mitral valve prolapse, obesity treatment, and gynecological surgeries for uterine conditions, sacrocolpexy, and hysterectomies.

**The da Vinci® Surgical System is comprised of three networked components:**

- 1) an ergonomic surgeons console, 2) a patient-side cart with up to four interactive robotic arms and quick-change surgical instruments, and 3) a high definition 3D vision system.

The da Vinci® Surgical System surgery process is fascinating. The robotic-arms are outfitted with miniaturized instruments – scissors, retractors, clamps, suture needles, etc. which are then inserted into the tiny prepared holes in the patient's body. Seated at the da Vinci® Surgical System console, the surgeon views a magnified, high-resolution 3D image of the surgical site. And as he or she manipulates the console's controls (mimicking the movements of a traditional surgery) the system scales, filters and seamlessly translates the surgeon's hand movements into precise micro-movements of the da Vinci® Surgical System instruments.

The da Vinci® Surgical Systems are currently being used worldwide. Tens of thousands of procedures

have been performed using the da Vinci® Surgical System. And, according to the company website: as of March 31, 2008, 867 units have been shipped worldwide.

### Landing the da Vinci® Surgical System business

As you can imagine, getting your foot in the door at Intuitive Surgical is not easy. But Mike Haupers, president of Swiss Precision, tells an interesting story.

"One day we got a phone call and the gentleman said, "I'm from Intuitive Surgical in California." (And at the time we had never heard of the company). They were in town and wanted to come and take a look at our shop. And I said "there are a lot of good shops out in California, what brought you to the Midwest?" He said "Well, I started in California and I'm working my way East. We're looking for quality shops that can do our products." So we gave them the tour and showed them a number of the other parts that we manufacture. What impressed them most was we were obviously heavy into medical and dental."

Related medical and dental experience is a must to be included on the short list of potential Intuitive Surgical vendors. But for Swiss Precision, it was quality that won them the work.

Says Haupers, "One of the first things I do with any new customer is to get together with their quality department and find out exactly how they are inspecting their parts and what problems they might have had with any other vendors. And that's what really helped out with Intuitive Surgical."

Haupers explains that Intuitive hosted a quality seminar this summer for 20 of their top vendor partners. The vendor partners got the privilege of doing a surgery (on a plastic dummy) with the da Vinci® Surgical System. "We actually did an operation and got to see our parts in action; which is neat. We have parts that are used on the actual surgical robot.

Walk into Mike Haupers' office and you'll likely hear beeps and bubbling and the sounds of steam pressure from the autoclave on his desk. At the quality seminar, Intuitive Surgical made it clear that they wanted their parts delivered certified. So Swiss Precision set about analyzing the parts on their end and asking questions about the quality protocol on Intuitive's Surgical side. And in the process they learned that Intuitive Surgical had been having some cleaning issues. They also learned that parts were being inspected via autoclave even though that specification did not appear on the part print. "So I went out and bought an autoclave and we do the testing here. And that's what I think is the most important thing – to not only match what your customer is doing, but exceed what he's doing."



Haupers got even more excited when he saw that he could cut one of his da Vinci® parts on the Tornos 30% faster as he was cutting them on his competitive brand machines.



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da Vinci® Surgical System.

Swiss Precision is a thirty-year-old company, running seven days a week and looking to expand their facilities. Haupers estimates that they cut 30 million parts in a year out of all sorts of exotic materials including Nitronic 60, 440A stainless and many other types of stainless, titanium, Inconel, and more. “We pretty much cut anything, explains Mike.

#### How Tornos fits into the story

Mike Haupers was first exposed to Tornos back when he ran the machine shop for a leading dental manufacturer in the Chicagoland area. Haupers became a big Tornos fan and when he bought that business and opened his own doors in 1979, Swiss Precision had seven Tornos M7 cam machines on the floor. That number grew to fifty-two Tornos. The shop was 100% cam until 1994 when they started converting over to the CNCs.

“I was bred on Tornos. If you had parts that were running up at 12, 15, 20 parts a minute, you couldn’t beat the Tornos cam machines! Their machines are magnificent. They always have been. They made an attachment for every application you could imagine.

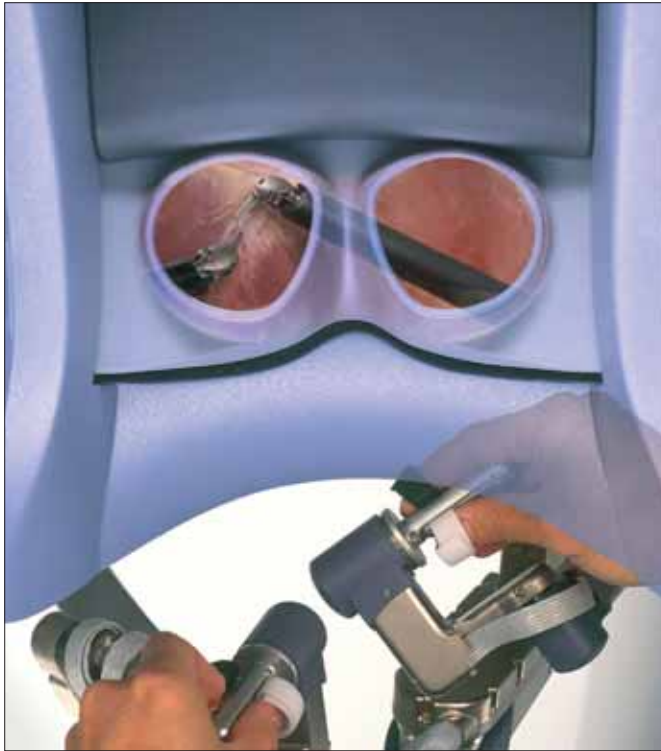
“So, in the 90’s, when we started converting to CNCs, I went to Tornos.” But he wasn’t happy with what he encountered at that time. And, like many other US machine shops, Swiss Precision looked to other brands for a while. In fact, Haupers bought 50 CNC machines.

The 1990’s were not a rosy period for Tornos US. And unfortunately that was also a crucial transition period for Swiss turning owners as they moved from their beloved cam systems to the new CNC type machines. Pressure to manufacture parts cheaply to compete with the new threat, China, were changing the industry.

Haupers relays his experience. “If I wanted somebody to service the machines, I had to fly them in from Connecticut. So the cost was prohibitive. Especially at that time with the emergence of China and a lot of those parts going across the pond. I had to be highly competitive and had to pinch my pennies.”

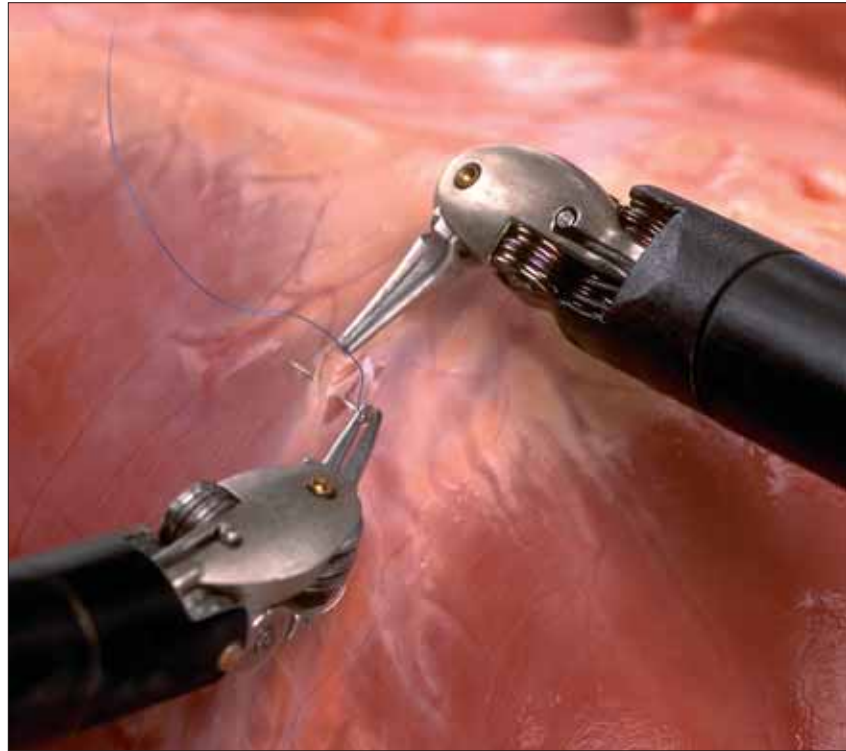
#### Tornos Turnaround

“I have never worked with a company like Tornos. Their application engineers are career people. And



InSite® Vision.

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I'm in this for a career too. So I like talking to someone who knows what they're doing. And that was the one thing I missed about not having Tornos those years."

So Haupers made a point to visit the Tornos booth at the International Machining Technology Show (IMTS) in Chicago. "I was so happy to go down to the IMTS and talk to Paul (Cassella) and everybody else.

"We went out to Lombard and they did a demo for us and Scott (Kowalski, president of Tornos US) spent a good hour and half with me. He asked me what turned us away and what brought us back. I am so glad to see Tornos here in the Chicagoland area! With as many Swiss houses as we have in the Midwest, they really needed a location here. It was a phenomenal move!

"It's a very nice facility. I was impressed by the training room and they have a good staff of people – very knowledgeable and personable." But then Haupers really lights up. "And the parts department! That was the first thing I asked Scott was "do you keep the wear parts here?" and he said, "let me show you" ...because I said, that was my major headache before."

So, with all those service issues addressed by the building of the Midwest location for Tornos – including a large spare parts inventory – Swiss Precision was ready to join the Tornos family again.

In fact, Tornos added three new Centers of Excellence across the US and new Techno-centers all over the world – making many long-time customers happy. A new 5000 m<sup>2</sup> building on the site of the company headquarters in Moutier houses a state of the art training and technology center as well as space for turn-key machines for customers. New facilities in France and Germany have also welcomed many customers. These facilities together celebrate a more visible and accessible customer-based organization worldwide.

Serving customers is a top priority for the New Tornos. Each of the new facilities allow Tornos to guarantee faster delivery times, convenient showroom demonstrations and easy access to their new industry-leading training facilities. They also provide increased access to Tornos sales, service and applications experts as well as parts and distribution. From coast to coast – all across the world – the new Tornos is focused on service.



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da Vinci® S Instrument Arm – angled.

### **Dropping da Vinci® Surgical System parts complete 30% Faster**

Haupers got even more excited when he saw that he could cut one of his da Vinci® Surgical System parts on the Tornos 30% faster as he was cutting them on his competitive brand machines. Haupers was cutting this particular part on two competitive machines. But when we saw that he could cut the part 30% faster on one Tornos machine – he was sold! “We were doing the da Vinci® Surgical System part in two halves. We wanted to consolidate it and drop it in one complete.” In order to keep within Intuitive’s Surgical price parameters, it became a must to achieve this.

And the guys out in Haupers’ shop were impressed too. “It opened a lot of people’s eyes when I took them out and showed them the modular system that Tornos has. And the multiple axes. And the power-tools. I told them I can definitely produce this part faster on a Tornos than I can on these products.” The whole Swiss Precision team was dazzled by the “New” Tornos – not just because of the changes Tornos had made to the machines and the control that added tremendous value – but also because of the improved support Tornos was now delivering.

As Haupers makes plans for the future, he is thrilled to be able to include Tornos again. Tornos never stopped delivering a quality product – “true Swiss quality.” Haupers agrees with this point. And now that Tornos has re-learned how to live by those other golden rules of customer service, it has regained a loyal customer in the process.

“We’re talking about remodeling the whole building. So it never stops. We’ve been here since ‘95 and, pretty much, this is all original. We own the land in the back and it’s time to remodel the offices and we need some more space.” It’s apparent that this Intuitive Surgical Top 20 Vendor is a big success. And thanks to the quality Tornos product and “done-in-one” concept (and great service), that success will only grow from here!



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**da Vinci**<sup>®</sup>  
SURGICAL SYSTEM

See a news US news clip of a prostatectomy here:

[http://www.davincisurgery.com/procedures/urologic/prostate/davinci\\_prostatectomy.aspx](http://www.davincisurgery.com/procedures/urologic/prostate/davinci_prostatectomy.aspx)

and visit the site to see live webcasts of da Vinci<sup>®</sup> Surgical System surgeries.