



The Finer Things

SWISS AUTOMATION, INC.



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The finer things keep shining through

Dedication to quality is a way of life for Swiss Automation

It takes but a single walk through Swiss Automation's facility in Barrington, Illinois, before one thing is abundantly clear: Ken Malo has a taste for the finer things.

From the front door to the back end of the machining room, the space of Swiss Automation is an unlikely amalgam of art, collectibles, and vintage machines that would likely confound the hosts of PBS' Antique Roadshow.

A tour given by Malo, the company's founder and current president, is peppered with phrases like "That's a Diego Rivera," or "This is from a surplus World War II naval observation plane that went down in Lake Michigan in 1965," and "The lamps are all from NASA parts they put together. They were reportedly used in one of the Flash Gordon movies."

Malo's desire for the finer things extends through his entire operation – Swiss Automation is known for turning out nothing but the highest-



Ken Malo, founder and president of Swiss Automation



The Swiss Automation facility in Barrington, Illinois

quality parts from its bustling-yet-immaculate machining floor. And it all starts with his choice of machines.

"For the small diameter – any kind of production, low, medium, high production – the Decos are the best machines," Malo says of the Tornos line. "When we go for quality, we go for Tornos."

And Swiss Automation has been using Tornos machines more or less since its founding in 1965. Back when the operation was just Malo working alone in a \$65-a-month storefront, he used four Tornos M7's to make connectors for power window switches for Ford.

"A penny apiece, and the cycle time was three seconds on the old \$350 Tornos – that's what each machine cost me," Malo recalls. "Every Thunderbird had like 15 of them in it. I was making them from 8 in the morning 'til midnight as a one-man shop.

I was younger. I had seemingly unlimited energy then."

More employees, same dedication

While he might try to deny it, Malo has retained his tireless nature. Only now he has a little help. Swiss Automation has continuously expanded, eventually outgrowing that old storefront and moving into its current space in 1998.

"I try to hire the best – the best and the brightest. It's helped us grow, so we look for the best of the best," he says. "It was a one-man shop for a long time. We now employ 130."

As the numbers have increased, so has Swiss Automation's training infrastructure. The company now has an apprenticeship program to bring new employees in. Each new hire goes through the same regimen, according to Vanessa Malo, Ken's daughter and Swiss Automation's director of human resources.



Machinist Scott Ensey focuses on his work

"We'll hire people who have never even seen one of these machines before," Vanessa Malo says. "We look for certain aptitudes, like they're mechanically inclined, or they like to work on their own cars. So they'll join and they start off in inspection. They start using all the tools and developing an eye for detail.

"The goal is for them to develop a perfectionist attitude, and then they'll start learning to read blueprints and experience other inspection techniques. Once they've developed the eye and passed a blueprint-reading test, we'll send them out to the floor, and they'll work with a mentor out there. The mentor will then get them trained on machine operation."

Swiss Automation generally promotes from within, meaning most employees start out exactly where Ken Malo did – at the bottom. But while Malo was forced to acquire most of his skills through a self-directed apprenticeship, his company has implemented an extensive training program.

"You have to train a lot. In this day and age, the schools just aren't

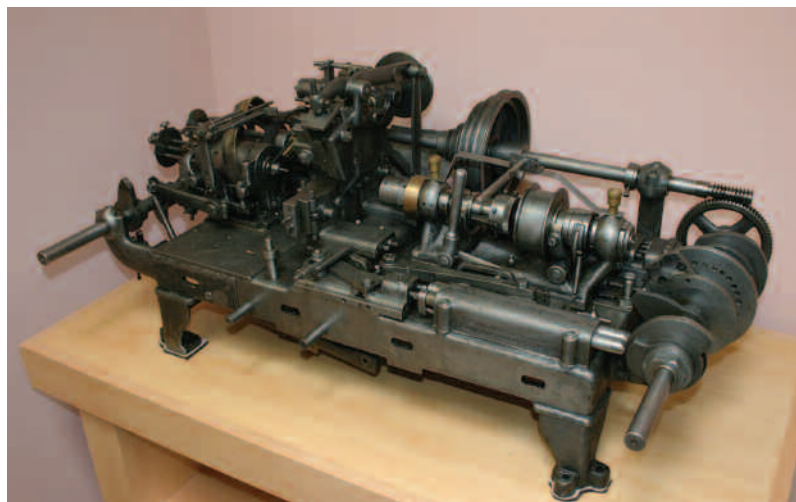
teaching it," Vanessa Malo says. "So you have to do it in-house; we have a classroom upstairs that seats 20. Plus, if you grow your own, they're used to the way you want things done and it's fantastic. It has worked out very well. We have a lot of guys here that have been here a long time. We have one setup man who is originally from Switzerland. He apprenticed at the Tornos factory in Moutier in 1955, and he's now been here for 32 years. We have some other guys who've been here 19, 20, and 23 years.

"We've had some guys that started off in shipping – our foreman, Marc Moran, he started in shipping, and then he moved to the floor, and now he's our foreman. And then we have another guy who barely made it through high school, and he's one of our best setup guys. It's just about finding the right mental-attitude people."

"Intuitive gearheads," Ken Malo chimes in. "If they've stripped all their nuts and bolts by the time they're 13 years old, and they're still working on things, then we want them. So street-rodders and customizers, motorcycle customizers, model airplane hobbyists, guys that aren't afraid to dive in. Good problem solvers, that's who's most successful in the industry."

A family affair

And Swiss Automation has been successful in the industry. Now producing an upwards of 170,000 parts per day, the company expanded its custom-built facility in 2006 to increase the overall square footage to 42,000. Though the organization and Malo have continued to evolve, at least one thing has remained constant: a loyalty to anything that has served him well.



A Tornos turning machine from 1896 on display at Swiss Automation

"My first job was in 1961, on Bechlers," he recalls. "Then I transitioned to Tornos in '62. That was at a small job-shop in Park Ridge, Illinois, at Sanborn Engineering. A third-generation Sanborn now works for me; I worked for his grandfather in '62. He never knew his grandfather. I tell him stories about his grandfather, what a brilliant guy he was, a pilot, an engineer, a real visionary and hero to all of his employees. He appreciates that."

The hiring of Frank E. Sanborn III based largely on his pedigree was hardly an isolated incident at Swiss Automation. Once the company identifies a good employee, they tend to want to corner the gene pool.

"We hire a lot of family members," Vanessa Malo says. "I don't even know exactly how many families we're up to now. We might be up to 20 families."

And the same loyalty goes towards the Swiss Automation's choice of machines. From his first experience with Tornos in 1962 – when the company was renowned as "The Watchmaker's Choice" – Ken Malo has been using its line of precision turning centers.

"We've had a lot of Deco 10s. Our latest acquisition, the 10a, is probably number twelve or so," he says.

"Heritage is important. Certain old cars have a heritage – BMW, Porsche, Bentley – that the new upcoming Korean and even Japanese cars are striving to attain. And you earn it through improvement of products, and creating cutting-edge technology. Just like the European discipline



Ken Malo catches some air in one of his racing Porsches

and perfectionist attitude towards engineering and build quality that show up here in the Decos."

Racing: A shared passion

It's not surprising that Ken Malo would use a vehicular metaphor when describing the quality of the Tornos machines. The man is almost as passionate about cars as he is about his company. He is a member of various racing clubs, heading to the track during his free time, with family members and employees – and even their families at times – joining in as well.

Given his penchant for the finer things, Malo's choice of automobile is no surprise: his fleet now includes four Porsches. Malo and Swiss Automation mainly use the cars as a tool to promote a positive experience with their customers, suppliers, bankers, and just about anyone with whom they do business.

"The Porsche club rents track time at local tracks," Malo says. "So we invite them out on the track and

I'm a driving instructor, my daughter's a driving instructor, and so is my foreman.

"This is how we entertain our customers; we don't play golf. We put them behind the wheel of one of my cars, give them a helmet and put them in a five-point harness. We have three certified track driving instructors to teach them, hands on, racetrack driving techniques," Malo says. "And we take our suppliers, too. We instructed [Tornos US president] Scott Kowalski, and if you look in [North American business manager] Leonard Lanute's office, he's got a whole collage of pictures from his track day that I made up for him. The Swiss Automation Racing Experience, we call it. If we get good service, or we need better service, they remember us for that."

Also memorable is the racing team that Tornos has assembled in connection with its partner, Vici Racing. Like Malo, the team prefers Porsche, with a GT3 RSR currently running in the American LeMans Series.

A need for speed

With all of the time its employees spend racing, it's no surprise that Swiss Automation can be just as fast away from the track. While the company clearly emphasizes quality, it's not at the expense of speed – just like a Porsche. This is especially apparent when a customer is in a tight spot, and needs a job done quickly. One such example came, coincidentally, with a partner company in the automotive industry.

"We delivered to South Carolina in 22 hours from getting the print, quoting it, and setting it up for them. We received the order at 11 a.m., and we were lucky to have the material on the shelf and a machine available. Their parts went out air freight at five in the morning the next day," Malo recalls proudly. "They were on the purchasing agent's desk at nine in the morning. So 22 hours service from Illinois to South Carolina, which is doable when you absolutely have to serve your customer.

"Sometimes when they need their parts tomorrow, if we can squeeze them in, we'll do that. We grandstand once in a while, to show how efficient we can be."

But that is not the only way that Swiss Automation impresses its customers. In the company's solid brick building, Malo has arranged the machining room in a way that emphasizes the positive while making a strong impact: he puts his Tornos machines near the main entrance to the work floor.

"It's very impressive to the customer, putting the Decos here first," he explains, pointing to his row of five identical Tornos machines. "They like to see continuity. They don't like to see a hodgepodge of different machines here and there. Neat, clean, and orderly is what sells. If we bring customers, we show them this first, they see the continuous Deco line and it's their first impression of the shop."

Swiss Automation trusts its employees

Though Malo's influence can be seen in the layout of Swiss Automation's machining floor and the meticulous nature of its employees, he does not feel the need to have his hand in every aspect of the company. The organization hires good people and then trains them well, so Malo trusts them as a group to combine what they've learned with their intuition and do things the right way.

"I give my people more and more free reign," he says. "I don't have to micro-manage them. I trust their decisions and the way they setup their work shifts, do the scheduling, etc. They know their shop floor duties better than I do, so I empower them. The shop culture that we've created is critical to our success. Trust is a two-way street."

That trust has resulted in having every employee be just as exacting about the manufacture of his or her parts as Ken Malo is. Each part undergoes a rigorous inspection process, both on the line and in two separate, technology-laden areas. Swiss Automation has a number of toolmaker and inspection microscopes, surface analyzers, programmable computer-video inspection systems, and a cadre of meticulous employees who work full-time in the inspection rooms.

"We try to have better inspection facilities and equipment than the incoming inspection at each of our customers," Malo relates. "When they initially visit us to check out our inspection procedures, they've almost always lusted for some of our higher tech equipment. 'Oh, if we only had one of these! Oh, you got one



A line of Decos greets machine floor visitors

of those? You've got the latest one of this?' We invest an awful lot in that department."

The inspection process, however, is made easier by having machines that produce parts exactly to specification. Swiss Automation's Decos, aided by the TB-DECO software, have a big hand in making sure that very few of the company's parts need to be rejected, while producing them in a timely manner.

"We're real happy with the TB-DECO software," Malo says. "It's easy to learn. We like the parallel programming, and it kicks out the most efficient program. Quality attracts more orders. Quality and on-time delivery.

"A lot of times, these days, price may not be quite as important as delivery. The clock is always ticking, as they say, and if they don't have the parts on time, their overhead goes sky-high. They've got lines down and their production department's waiting, so you have to give them an accurate delivery date. Should they agree to it, you have to stick to it. No excuses."



Employees in the inspection room meticulously examine every part

No excuses for not being the best

Of course, even in the present-day climate where time is of the essence, price is still an enormous factor. While Swiss Automation's Decos run three shifts a day, 24/7/365, it's their efficiency that makes the difference on pricing. Malo relates a story about a specific medical part: "We run these like a million at a time, on two or three Decos all the time. The company's target price was half of what they were previously paying. And I could only meet that by putting it on a Deco. The previous shop was doing multiple operations. They couldn't keep up and were charging too much. So it's a lot more efficient, one operation, on the Decos. The parts come out of the machine finished. No secondary operations are needed."

A change of administration has also helped Tornos become more efficient. After Scott Kowalski took over as president of Tornos US, he put a renewed emphasis on customer service. While Tornos' machines were always renowned for their quality, its service in the United States did not have the same stellar reputation.

"Scott has been a refreshing change," Malo says. "It was time for some fresh, young blood with new ideas and new energy, plus a renewed dedication to training and customer service. I appreciate his youth and enthusiasm for the job, and the experience. So he's the right guy for the job. Before I brought him out to the racetrack, he used to be a Corvette guy. We converted him from Corvette to Porsche."

So with a little help from Swiss Automation, you can add Scott



Some workpieces are bisected to ensure quality inside and out

Kowalski to the list of devotees to the finer things. ■

*Tornos US and **decomagazine** would like to thank Ken Malo, Vanessa Malo, and the entire Swiss Automation team for their participation in this article.*

Equipment List



Production Equipment

- 11 Tornos Deco 10
- 4 Tornos Deco 13
- 1 Tornos MultiDeco
- 1 Citizen E32
- 12 Citizen K16
- 3 Citizen L20 Type V
- 2 Citizen L20 Type VII
- 6 Citizen M12
- 9 Citizen M16
- 14 Citizen M20
- 5 Citizen M20 (Old Style)
- 1 Citizen M20 Y-axis
- 13 Citizen M32
- 2 Citizen M32 Y-axis
- 1 EuroTech 420SLL-Y
- 2 Hrdinge GT
- 2 Traub TNL26

Inspection Equipment

- (9) 14" O.G.P. Optical Comparators with DRO
- 16 Surface Plates with Height Gauges
- 800+ Assorted Micrometers, Dial Micrometers, Pin Gauges
- 2 Mitutoyo profilometers - (surface roughness measurement) model SJ400
- 6 Nikon SMZ645 Microscopes 8X to 50X
- 1 O.G.P. Programmable Smart Scope Video Coordinate Measuring Machine
- 1 Mitutoyo RA-400 Roundness & Cylindricity Checker
- 2 Mantis Magnified Viewers

Secondary Equipment

- 12 Rockwell Drill Presses 1/2" Capacity with Production Tables
- 2 Nichols Productions Horizontal Milling Machines, 5HP
- 2 Hardinge HC Chucks
- 4 Sweco Vibratory Finishing Machines : 1 through 5gal Capacity
- 1 Sunnen Production Hone
- 4 Hardinge Speed Lathes

Tool Room Equipment

- 2 Bridgeport Model J Vertical Milling Machines
- (2) 14" x 40" Tool Room Lathes
- 2 Brown and Sharpe 6 x 18 Surface Grinders
- 7 Agathon Diamond Wheel Tool Grinders

Programming Equipment

- 2 Sun Sparc-Station 1+ with Hard Drive & Tape Back-Up
- Printer, Monitor and Cim-Linc Software
- 2 Parts Maker® CAM for Swiss-type CAD/CAM Software
- 3 Solidworks Premium CAD Software

Looking for a reliable, quality-oriented Swiss CNC screw machine vendor?

Look no further! Swiss Automation, located in Barrington Illinois, has been in business for over 40 years making quality parts to your print specifications. We are ISO Certified with 90 production machines including 16 Tornos machines in Deco 10 and Deco 13 models, and Multi-Deco. Also on our floor: Traub TNL's, Eurotech, Hardinge and Citizen.

A state of the art facility - with an addition on the way in '09 and a staff of young and extremely talented, problem-solving-oriented employees who are

dedicated to excellence make Swiss Automation a great supplier and a great place to work. With more machines needed to fill our new addition, the opportunities at Swiss Automation gives us a bright future.

With Swiss Automation, get quality complex parts, the first time every time on the finest and most capable Swiss CNC equipment available. Let us help you be successful in today's challenging marketplace.



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