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TORNOS
EvoDECO 10



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productivity at
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Swiss GT – Machines
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Filières à rouler
Canons de guidage
Filières à moleter
Filières à galeter
Canons 3 positions



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Harold Habegger SA
 Fabrique de machines
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 Route de Chaluët 5/9
 CH 2738 Court
 +41 32 497 97 55
contact@habegger-sa.com
www.habegger-sa.com



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renggli.b@tornos.com**Editing Manager**Céline Smith
smith.c@tornos.com**Graphic & Desktop Publishing**Claude Mayerat
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Phone +41 (0)79 689 28 45**Printer**AVD GOLDACH AG
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"The experience gained in crisis situations can only serve to shape a brighter future. A future where industry has an important role to play as a source of strength for customers whose products help save lives."

Michael Hauser CEO, Tornos

An industry committed to the fight against Covid-19

Michael Hauser CEO, Tornos

Spring 2020: if anyone had told me two years ago that we would one day have to suspend production for several weeks, first in China and then in Switzerland, because of a virus, I would probably have laughed.

Today, at the dawn of what I hope will be a promising summer, it must be said that the ancient Greeks were once again right. Their "panta rhei" adage resonates strangely in this year marked by the seal of the coronavirus disease 2019 (Covid-19). "Panta rhei," which is translated as "all things are in flux", reminds us that nothing is as constant as change.

An industry called to reinvent itself

Our industry, more prone than any other to fluctuations, has been able to perform well in the past. However, Covid-19 hit an industry that was already in decline. This pandemic comes on top of the current machine tool industry slowdown that began in early 2019 as a result of a global economic downturn, geopolitical uncertainties and structural change in the industry. All this is influencing the demand for capital goods—including machine tools—and is therefore changing the entire environment in which Tornos operates: We are, in fact, facing two crises at the same time. We are indeed subject to unprecedented changes and uncertainties. This situation is different from previous, ordinary crises in the highly cyclical machine tool industry. The high level of uncertainty during the Covid-19 crisis and the impact on the macroeconomic environment make assessments and forecasts extremely difficult. However, the transformation of the automotive industry and the changing needs and requirements for machining equipment are becoming increasingly clear and

Tornos has recently initiated a change of market orientation, focusing on another of its core areas, Medical & Dental.

Tornos, always at the medical forefront

Ironically, this virus has also changed the game in this sector. Less in the spotlight than doctors, nurses and caregivers, medical companies have been under great pressure, and are still working hard to deliver life-saving equipment to intensive care units as quickly as possible. Among this equipment are the famous ventilators from Hamilton Medical, the Graubünden-based company that suddenly caught the attention of the general public. Yes, Hamilton is involved in saving lives, as is Gloor Medical in Burgdorf, Switzerland, which produces devices to regulate the pressure and flow of medical gases. In addition to their joint presence in intensive care, these two companies have another thing in common: Both have counted on Tornos' expertise for several decades in the production the key parts for their devices. In this way, Tornos participates indirectly in the general effort to combat the coronavirus. And there are many examples of this as a number of companies worldwide place their trust in Tornos and use our machines to produce essential parts for the proper functioning of devices which help professionals in the medical sector to save lives.

The example of French bar turners

In France, the industrial fabric of the Arve Valley has been reorganized to meet current needs. Thus, the Bontaz group has made its know-how available to

supply the 10,000 respirators requested by the government. Its teams have been on the job since March to deliver mechanical parts and medium-sized production runs. Parts are produced on Tornos automatic lathes. It's the same in Spain, where Parker also produces parts for respirators on its three Tornos machines, a DECO 20 and their two CT 20s. In Poland, Harris Calorific International stands out for its respirator valves, are also produced on Tornos machines.

Preparing for the future by anticipating it

Accuracy and reliability are extremely important—now more than ever—for devices used for artificial respiration. Accuracy and reliability are also required for medical diagnosis and for the analysis of chemical substances. This is why any company eager to stand out in this field joins forces with Tornos to meet the ever-increasing demand. Tornos, with its many years

of experience and solid expertise in the medical field, is demonstrating its agility with its new market orientation, even more focused on the Medical & Dental sector, by choosing to put people at the center of its concerns in order to put technology at the service of everyone's health and well-being.

The Covid-19 pandemic will come to an end one day but it will leave undeniable traces in the industrial fabric of the entire planet. The experience gained in crisis situations can only serve to shape a brighter future, where industry has an important role to play as a source of strength to customers whose products help save lives.

A stylized, handwritten signature in black ink, likely belonging to a representative of the company mentioned in the text.



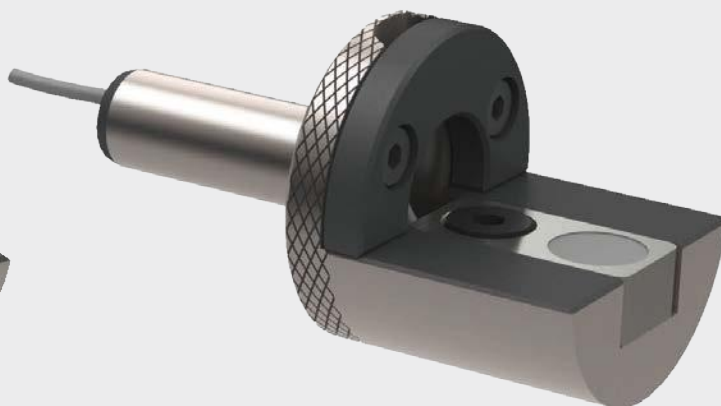
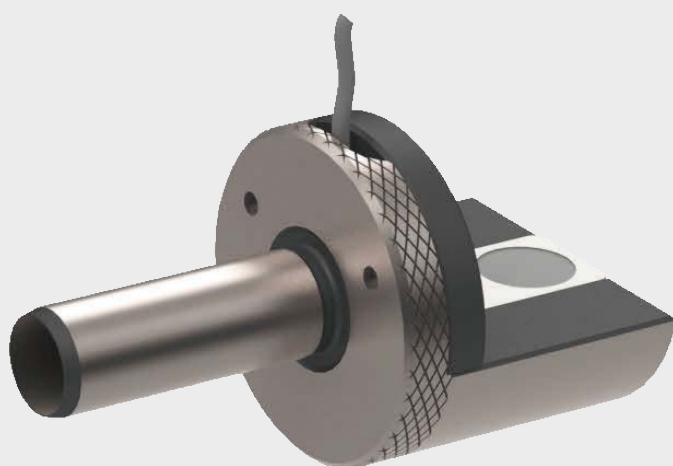
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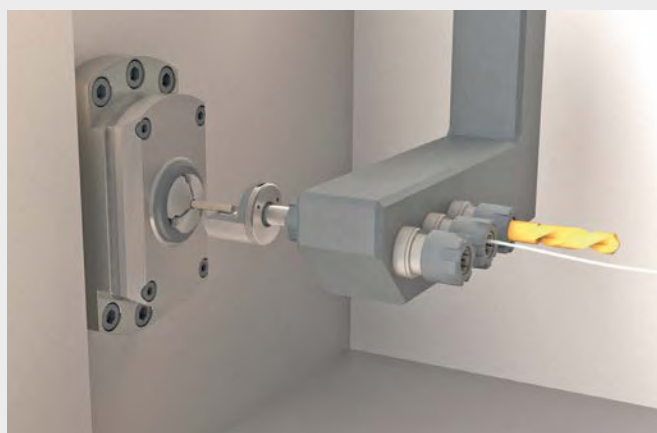
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TORNOS

EvoDECO 10



Several of the essential parts of the Hamilton ventilators are produced on a Tornos EvoDECO 10.

*Tornos participates in overall effort to combat
Covid-19 through its longstanding*

partnership with Hamilton

In the battle against Coronavirus, respiratory assistance devices can make the difference between life or death for thousands of patients.

Switzerland-based Hamilton, a world leader in the manufacture of ventilation solutions, is doing everything it can to meet the demand. At present, the company has increased production capacity by 50 percent compared to last year. At the heart of this production ramp-up is several Tornos machines that are running at full capacity to produce one of the nuts essential for ventilator function. This is one of the ways Tornos is bringing its expertise to the frontline of the healthcare industry that is combatting the global Covid-19 pandemic.



Hamilton Medical AG
Via Crusch 8
7402 Bonaduz
Switzerland
Tel.: +41 (0)58 610 10 20
info@hamilton-medical.com
hamilton-medical.com

Although little publicized prior to the Covid-19 pandemic, ventilators play a major role in the treatment of patients with severe respiratory symptoms and offer them better chance of survival. Manufacturers are working hard to meet the ever-increasing demand for respirators, which has been growing since the end of January. We work day and night, including weekends, and do not spare any efforts," says Björn Gerhard, Culture Transformation Specialist at the company in Bonaduz, in the Swiss canton of Graubünden.

“We produce one
of the essential parts
of our respirators
on an EvoDECO 10”

Hamilton's medical division, Hamilton Medical, was founded in 1983 after discussing the future of medicine with a former National Aeronautics and Space Administration (NASA) employee who had become an anesthesiologist. Company executive Steve Hamilton developed the vision of closed-loop ventilation to automatically coordinate blood gas values with the operation of the ventilator—an intelligent ventilator that improves patient safety and reduces the workload for doctors while leaving them in control.

Hamilton therefore offers solutions for every situation. Specializing in medical equipment, the company produces mechanical ventilators, with the same standard user interface and using the same intelligent ventilation technologies, artificial respirators that hospitals use for intensive care. The latest generation of these devices was already in great demand before the coronavirus pandemic. But demand literally exploded at the end of January, and although the company in Graubünden is doing everything it can to increase its capacity, it is still not able to meet all the demands.



A world leader in most markets for artificial respirators, Hamilton is also active in medical technologies, but also in accessories and consumables that have been specially designed to optimize ease of use and



patient safety. Less mediatized at present but just as indispensable, Hamilton is also a leader in high-quality diagnostic systems, with blood analysis and DNA testing at the forefront, while distinguishing itself in other leading systems for medical technology, pharmacology and laboratory analysis. And it is in this particular field that Tornos has been able to distinguish itself for 22 years, by offering Hamilton a high-precision solution with its DECO range.

At the time, Hamilton was facing major problems with the supply of a very fragile component for automated pipetting systems with multichannel pipettes. Tornos was asked to respond to this problem and immediately proposed an appropriate solution. Intrigued from the outset by the precision of the DECO 2000, Hamilton then placed an order for six additional machines, two of which were ordered for its Romanian subsidiary. Twenty-two years later, the Tornos machines are still running at full speed in the Bonaduz workshops to meet unprecedented global for ventilation solutions. "We produce one of the essential parts of our respirators on an





EvoDECO 10," explains Verenio Vitali, a Hamilton polymechnic who works mainly on Tornos automatic lathes. This is a Q nut, made of PEEK (polyether ether ketone), which is inserted into the dosing robot. It is a small part, but one that plays an important role in the whole process.

This part involves a lot of milling operations. The EvoDECO, with its modular work area, lends itself admirably to this part. It is possible to equip the machine exactly according to the requirements of the workpiece. The machine's four independent tool systems and the four motorized rotating tools work wonders. The large machining area enables the



chips generated by this workpiece to be processed efficiently. This is a good opportunity for Tornos to build an even more solid reputation and continue a collaboration that began shortly after the launch of Hamilton, the medical equipment manufacturer in Switzerland.

Today more than ever, precision and reliability are of the utmost importance for devices used for artificial respiration. Accuracy and reliability are also required for medical diagnosis and for the analysis of chemical substances. Hamilton and Tornos have been able to combine their expertise to meet this ever-increasing demand. Tornos, with its many years of

experience and solid expertise in the medical field, is therefore part of a dynamic that corresponds to its new market orientation, even more focused on the medical and dental sectors, putting people at the center of its concerns, and putting technology at the service of public health and well-being.

hamilton-medical.com





Petron Automation is currently producing 20,000 ventilator armatures per week with its four SwissNano 4 machines from Tornos.

PETRON AUTOMATION: Supercharged productivity *at Petron Automation*

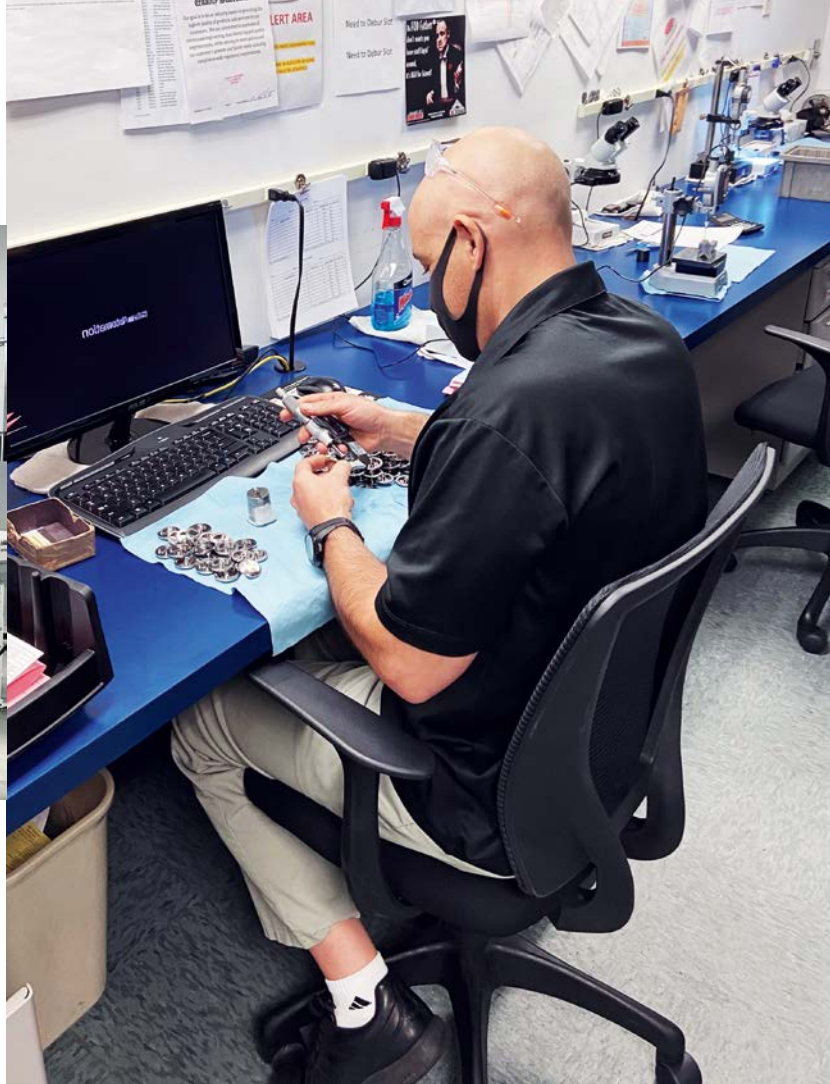
As the Coronavirus (Covid-19) pandemic pushes healthcare services to their limits, Tornos SwissNano is helping a US-based subcontract machine shop, Petron Automation to supercharge its production of a complex, tight-tolerance component for the much-needed and lifesaving ventilators.



Petron Automation, Inc
65 Mountain View Drive
Watertown, CT 06795
US
Tel. 860 274 9091
Fax 860 274 7451
info@petronautomation.com
petronautomation.com

Established 40 years ago by Mike Petro, Sr., the Watertown, Connecticut-based business began as a secondary process shop supporting the local eye-let industry with such applications as broaching, piercing, edging, and slotting. Since then, Petron Automation has evolved as a go-to source for Swiss-type computer numerical control (CNC) machining. CNC machines opened new horizons for the business and, having established itself as a highly reliable medical industry partner, the 24-member Petron Automation team knows its way around CNC Swiss machining.

"Our greatest strength is producing complex, tight-tolerance parts that require repeatability. With this expertise, we deliver the reliability our customers expect and the confidence that they've come to the right place when they come to us," says Paul Thornberg, Petron Automation Vice



President of Business Development. “Our goal is to be an industry leader, providing the highest quality products and service to our customers. In fact, that’s our quality statement.”

With that commitment and proven expertise, it’s no surprise that manufacturers of small, challenging medical device components turn to Petron Automation for the quality required in the risk-averse medical sector. By the same token, Petron Automation turns to Tornos for highly precise manufacturing solutions including four SwissNano 4s, two EvoDECO 32s, two EvoDECO 16s, two MultiSwiss 6x32s, and three DECO 13s.

In early April 2020, after the coronavirus disease 2019 (Covid-19) pandemic reached US shores, the World Economic Forum reported that while 77,000 new ventilators were enough to meet the entire global market demand in 2018, New York City alone forecast a need for 30,000 additional machines. By April, some ventilator manufacturers had already boosted their production by 30 to 50 percent but—by themselves—saw no possibility of delivering the required 500 or 1,000 production growth needed. Presented with the opportunity to help its customer defy those dire predictions, Petron Automation rolled up its sleeves and made it happen.

“Obviously, we had been paying attention to what was happening around us,” Thornberg said, “and we knew the need for parts for ventilators and blood pumps. In early March, we were at the end of our

first-quarter 2020 order for a specific ventilator part for an important customer, who told us, ‘We’re going to have a huge uptick in these parts.’”

At that point, Petron Automation had been producing 5,000 ventilator armatures per week for that customer, who asked the business to ramp up to 20,000 parts per week. The acclaimed SwissNano—the micro and nano precision champion—helped the business double its production capacity for that armature within a week. Machined from bars of 430FR stainless steel, the part has critical dimensions plus/minus .00035 inches (.0088 millimeters).

“It’s got some tight tolerances and we must maintain very sharp edges with maximum edge breaks to a maximum of .0005 inches (.0127 millimeters) with surface finish under Ra .25 μ m (Ra 10 μ m), and we are producing 2,000 pieces per machine, 10 hours per day, holding those tolerances,” he explained.

To reach those ambitious targets, Petron Automation turned to two of its four Tornos SwissNano machines, which were already set up and ready for ramp-up.



“There’s a certain level of pride, knowing that we are helping out during a public health crisis by providing our customer with a part that helps save lives”

“We didn’t stop the presses, so to speak, but we reacted to the customer’s need within one and a half days and met it within a week. This customer is very important to us. They have a very large machining presence in their own facility, but they send us their really challenging, high-precision, tight-tolerance parts—the parts for which they either don’t have the technical knowledge or the necessary equipment,” Thornberg said.

That ramp-up truly put the shop’s SwissNano 4 machines to the test.

“The reliability of these machines allows us to run these parts lights out with very little deviation from tolerances. One of our SwissNanos ran for 23.9 hours on May 13–14, and the other ran for 23.4 hours on the same day. That’s a testament to the machines capability.”

Thornberg, who has more than 30 years of manufacturing experience, knows that the combination of state-of-the-art technology and Petron Automation’s passion for customer service are an unbeatable combination.

“There’s a certain level of pride, knowing that we are helping out during a public health crisis by providing our customer with a part that helps save lives,” he said. “At the same time, though, this was something that Petron would do for any of its customers that need a call to action. Because of our people, our expertise, and the equipment that supports us, we would go to any extraordinary lengths to satisfy our customer’s needs.”

petronautomation.com



One of the key valves
of Gloor Medical's control systems is
produced on the EvoDECO 32.

TORNOS AND GLOOR MEDICAL:

The combination of impeccable
Swiss quality
and service for patients

Gloor Brothers Ltd is an owner-managed family business based in Burgdorf, Switzerland. For more than 70 years, the regulation of pressure and flow of technical gases has been its core competence. When the business earned EN ISO: 13 485 certification in 1994, this core competence was extended to medical technology and continuously expanded upon in following years. With the Coronavirus (COVID-19) pandemic, the demand for fittings for therapeutic oxygen delivery devices has risen sharply, resulting in a capacity bottleneck in the Turning department. Thanks to a longstanding collaboration between Gloor Medical and Tornos, both of these leaders in their respective fields were able to react quickly and make valuable, lifesaving contributions.

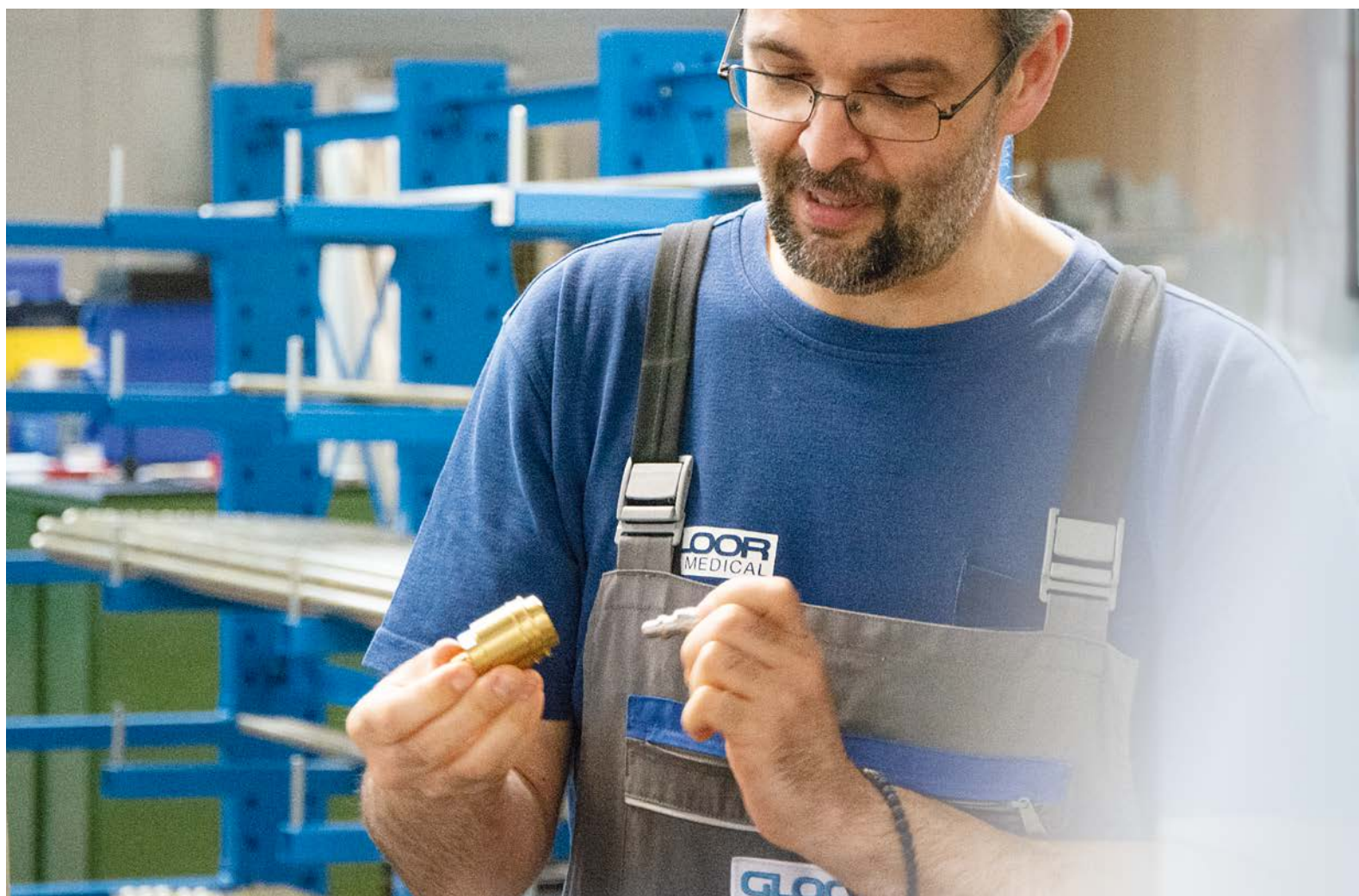


Gebr. Gloor AG
 Kirchbergstrasse 111
 3401 Burgdorf
 Switzerland
 Tel. +41 34 427 47 47
 Fax +41 34 423 15 46
gloor@gloor.ch
gloor.ch

Gloor Medical is the leading supplier in Switzerland in the field of medical gas supplies and its services range from the planning and implementation of the pipeline network in hospitals and doctors' practices to the fittings for supplying patients with the required medical gases.

The product range covers the supply of medical gases from central gas supply systems to fittings for mobile emergency medicine. The central gas supply includes automatic switchover of the supply sources with

“Our employees are trained at the Tornos Academy in Moutier. When they return from their courses, they have mastered the machine and its programs and are able to reach their full potential.”



medical gases, the area shutoff and monitoring units up to the extraction point of the gases for supplying the patients with the necessary medical gases. The range is supplemented by all the withdrawal devices, pressure and flow regulators, and vacuum fittings.

Gloor Medical's products are developed and produced exclusively in Switzerland. This is the only way to ensure the high quality and reliability of the devices throughout the entire production process. The in-house development and production also provides the flexibility to respond quickly and professionally to special customer needs and to develop and manufacture the required products.

Gloor Brothers Ltd has maintained a close partnership with Tornos in the field of turning machines for decades. In the 1990s, the management decided to purchase its first Tornos computer numerical control (CNC) machine, which is still in operation today for special fittings. Over time, five more Tornos single-spindle CNC turning machines were added. These machines play a major role in ensuring that brass parts can be manufactured to the required quality to ensure the reliable operation of fittings in the medical sector.

Andreas Weyermann, Head of Manufacturing at Gloor Brothers Ltd, is delighted with the recent arrival of a brand new Tornos EvoDECO 32, which





was chosen for its amazing precision and unsurpassed capabilities.

“Our employees are trained at the Tornos Academy in Moutier. When they return from their courses, they have mastered the machine and its programs and are able to reach their full potential,” he says.

That potential is in a continuous process of development as the market is constantly evolving.

“The coronavirus pandemic has greatly increased the demand for our products,” says Weyermann adds. “So, we had to increase our production capacity to meet the demand.”

In this task, the production manager and the head of the Turning Department, Sasa Selenic, can rely on the performance of the Tornos machines, which run at full speed day and night.

"We still work in one shift, but the machines have a certain autonomy and run unattended for several hours at night in the so-called ghost shift", Weyermann explains. "Our company currently has about 90 employees, seven of whom are apprentices in the polymechnic and commercial clerk professions. In Germany, we have a subsidiary in Lübeck, which is active in the sale and service of products for medical technology."



Watch
the video
report

[tornos.com/en/content/
success-story-3-gloor-tornos](https://tornos.com/en/content/success-story-3-gloor-tornos)

The company's simple and effective slogan, "Swiss quality that convinces," perfectly summarizes the goal that Gloor Medical wants to achieve with its products: excellent quality for the supply of medical gases for pressure and flow to patients. All manufacturing phases, from design to the final product, are carried out by the Burgdorf-based company and quality is monitored throughout the entire process. Swiss Made precision, flexibility, sustainability, and social commitment are a matter of course for Gloor Brothers Ltd. Tornos is a reliable partner in the firm's goal of daily improvement. In these very challenging times, the values shared by Gloor Medical and Tornos are of vital importance.

gloor.ch



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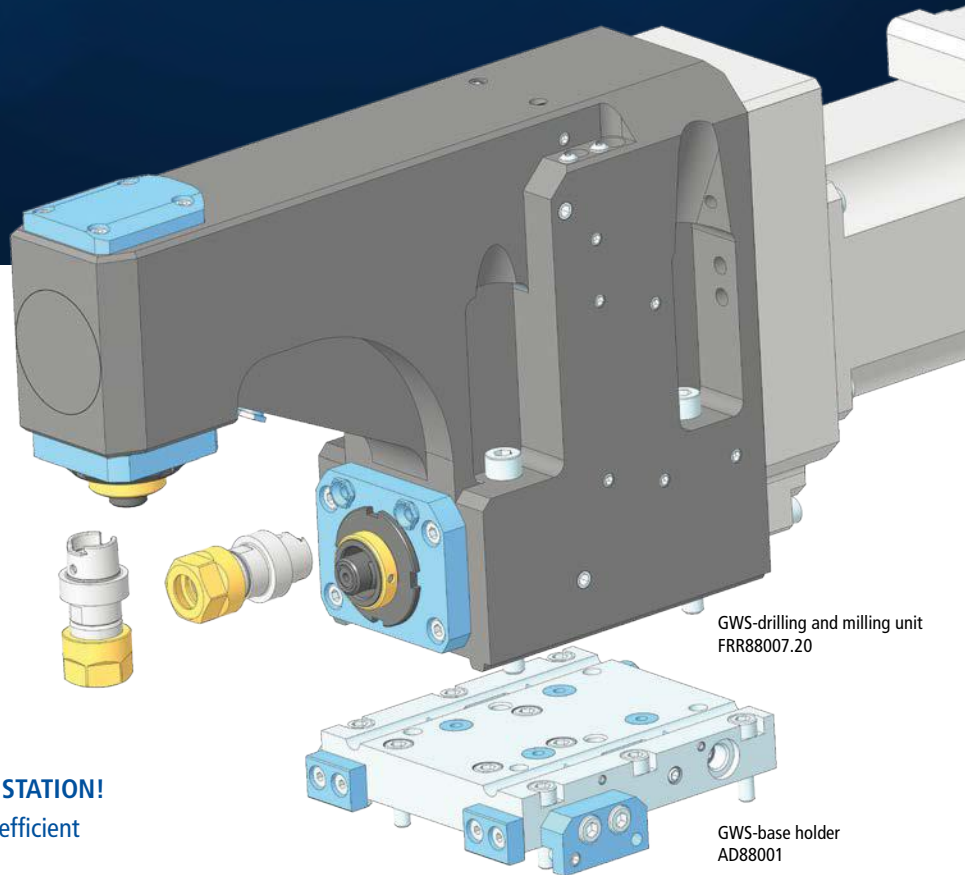
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Swiss DT and Swiss GT – Machines that meet all your requirements

Both the Swiss DT and Swiss GT machine models cover almost the full range of workshop requirements. As a machine tool 'partner', Tornos and these two models enable manufacturers to respond to the numerous demands of industry and rise to challenges previously unattainable... all while offering easy and intuitive operation. These machines feature goal-oriented and consistent functions and they can be equipped with a large variety of options and synergy that can be programmed in a similar manner. The machines boast an ease of use which is extremely rare in workshop practice.

TORNOS

Tornos SA
Industrielle 111
CH-2740 Moutier
Switzerland
Tel. +41 32 494 44 44
contact@tornos.com
tornos.com

Swiss DT: high performance and flexibility

This machine is offered in two versions for machining diameters of 13 mm and 25.4 mm. Both models have a similar machine base, yet their kinematic system is very different. While the DT 13 is aimed at high speed machining, the Swiss DT 26 model is optimized for high chip removal rates and flexibility. The Swiss DT 26 can be equipped with an impressive number of rotary attachments such as:

- Thread-whirling cutter
- Polygon cutter
- Gear hobbing device
- Slotting attachment
- Milling unit
- High-frequency spindle

The machines have a gang tool post that has a modular design, and this permits optimum tooling configurations. Both the Swiss DT 13 and Swiss DT 26 have five linear axes and two C-axes each. Both machines are provided with a large machining area that enhances the visibility and accessibility for the operator. Unlike the smaller Swiss DT 13 model that boasts

an optimum footprint with a depth of 870 mm, the Swiss DT 26 has a depth of 1,300 mm. This larger base implicates a higher rigidity and better vibration damping properties that enable the Swiss DT 26 to achieve a higher machining accuracy, better surface finishes and subsequently increased tool life.

Based on these features, the customer can perform machining tasks with larger cutting depths at higher feed rates and spindle speeds. To make the new Swiss DT 26 suitable for the heavy-duty machining parameters, the Swiss-type lathe is equipped with a powerful 10.5 kW motor that drives the front and rear spindles and delivers an impressive torque level throughout the entire speed range up to 10,000 rpm.

Thanks to their extremely powerful spindles, the Swiss DT 13 and Swiss DT 26 are the only 'entry-level' machines that are able to achieve such efficiency levels!

Last but not least, both the Swiss DT 13 and Swiss DT 26 can be used with or without a guide bush.

Unique special offers

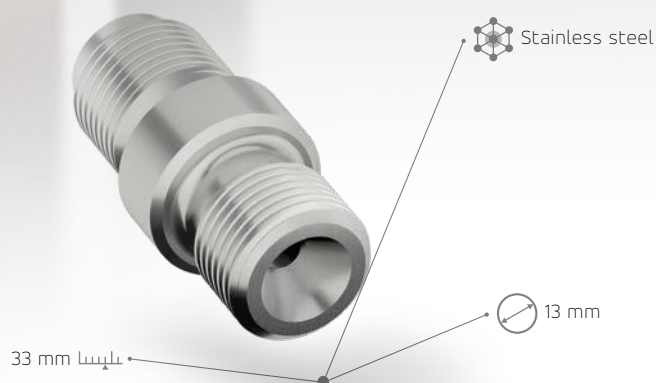


The Swiss DT and Swiss GT machines as well as various other machines are now available with particularly attractive options and pricing structures. For more information, please do not hesitate to watch the special-offer section of the Tornos website! Why not 'enable' the notifications tab to make sure you don't miss any of our special offers!

Do not hesitate to log on to tornos.com/en/content/special-offers-listing



Swiss DT		13	26
Maximum diameter	mm	13	25.4
Number of linear axes		5	5
Number of C axes		2	2
Number of independent tool systems		2	2
Total number of tool positions		21	22
Positions for driven tools		7	8



Automotive

Swiss GT 13, Swiss GT 26 and Swiss GT 32

Three machines, three diameters and a broad range of possibilities. The Swiss GT range is available in three diameters:

- 13 mm
- 25.4 mm
- 32 mm

Each machine model in this family is provided with six linear axes, so the operator can use three numerical axes for both the main and back machining operations. The basic kinematic design of the machines comprises three motor drives (two on the gang tool post and one for back machining operations) that are used to drive the numerous driven tools. Just as with the Swiss DT, virtually anything is possible with the Swiss GT machines – turning, drilling, tapping, milling, polygon cutting and thread whirling of both internal and external threads, gear hobbing, high-pressure drilling, stamping/broaching and even the use of high-frequency spindles at 80,000 rpm.

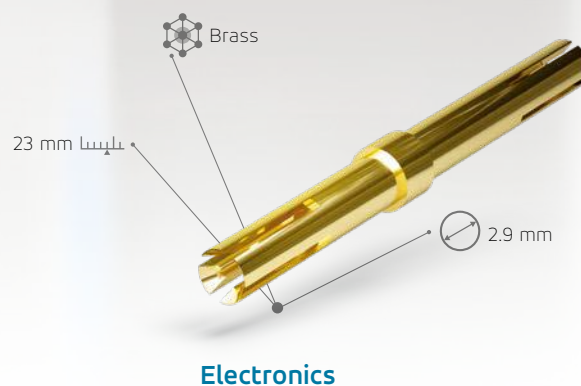
Another feature the Swiss GT has in common with the Swiss DT is the facility for guide bush-less operation.

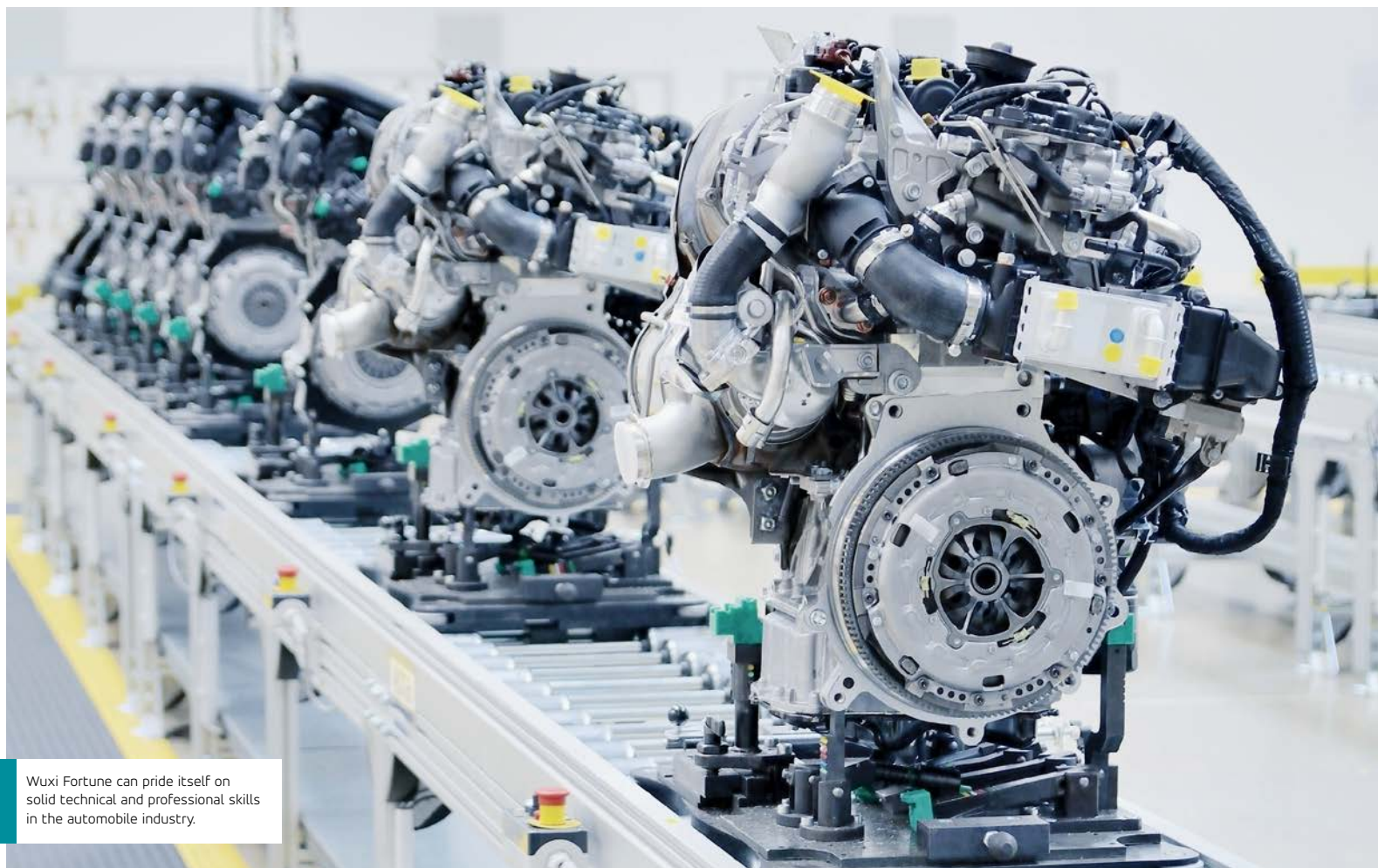
Both the Swiss GT 26 and Swiss GT 32 can be equipped with a B axis that enables the production of almost any workpiece. The additional B-axis makes the Swiss GT 32 machine a real bar milling center. Thanks to its B-axis, the machine can be used for milling at any angle via simple CNC programming making mechanical angle adjustment no longer necessary.

tornos.com



Swiss GT		13	26	26B	32	32B
Maximum diameter	mm	13	25.4	25.4	32	32
Number of linear axes		6	6	6	6	6
Number of C axes		2	2	2	2	2
B axis		-	-	Yes	-	Yes
Number of independent tool systems		2	2	2	2	2
Total number of tool positions		30	40	36	40	36
Positions for driven tools		12	14	16	14	16





Wuxi Fortune can pride itself on solid technical and professional skills in the automobile industry.



Wuxi Fortune produces many parts for the injection module of petrol engines at its factory.

WUXI FORTUNE TECHNOLOGY:

Tornos helps

Wuxi Fortune

expand in the automotive industry

Identifying a business opportunity is one thing, but turning an opportunity into a profit center is quite another. When Wuxi Fortune Technology Co., Ltd. founder and CEO Jian Wang decided to pursue manufacturing certification with one of the world's largest automotive technology powerhouses, he chose Tornos as his partner for turning machines, application and process know-how, and after-sales support.



Jiangsu Fortune
Wuxi Fortune Technology Co., Ltd.
No. 68, Zhujiang Road, New District
214028 Wuxi, Jiangsu
China
T +86 510-8534 3308
wxfortune.com

Established in 2002 with just one horizontal machine center, several vertical machine centers and 30 employees, Wuxi Fortune today has 350 employees—including 38 process engineers and 35 quality engineers. The company's two production sites, both in the booming Wuxi New District industrial center 120 kilometers west of Shanghai, boasting production space totaling more than 35,000 square meters.

A strong will to grow

It's only natural that Jian Wang set his sights on securing a place among Tier 2 suppliers to China's automotive industry: The nation has the world's largest automotive market producing 27.81 million cars

in 2018. At the same time, it is notoriously difficult—often taking up to three years for a new player to carve out a place in China's automotive supply chain.

"The newly implemented National Emission Standard VI requires qualified and long-term development partners, and there are quite a few in China in terms of technology, ideas and strategy.

For large-scale suppliers with diverse businesses, it is often difficult to meet the rapidly developing requirements," Jian Wang says. "But Wuxi Fortune has automotive industry experience in milling and production of parts for diesel injections. We also had a strong will to further expand our market."

On top of Wuxi Fortune's automotive industry know-how and mastery of milling, Jian Wang identified a gap in the market. "We saw there was a place for high-end auto parts production by turning and understood the great potential it represented," he says.

"We needed high-end, reliable and effective turning machines that would guarantee our ability to serve automotive customers. We knew that using advanced production equipment and technologies would help identify us as an excellent supplier, allowing us to deliver parts earlier than expected and even become an exclusive supplier of some specific parts."

Helping pave the way

Jian Wang knew from the start that he wanted multi-spindle turning machines in order to gain higher efficiency, greater product consistency and lower manpower and production costs.

"At the time, multi-spindle turning machines were quite new in the Chinese market, but we are committed to being at the forefront of technology," says Jian Wang, who visited and compared several turning machine manufacturers before purchasing Tornos. Now there are 2x MultiSwiss 6x14, 1x MultiSwiss 8x26, 1x SAS 16.6, 1x MultiSigma 8x28 for small size precision parts. "Our Tornos machines are reliable and efficient. Tornos provides completely integrated services, application knowledge, machine maintenance, training and spare parts to the Chinese

"Our Tornos machines are reliable and efficient. Tornos provides completely integrated services, application knowledge, machine maintenance, training and spare parts to the Chinese market. The Tornos machines and services enable us to serve our high-end customers and maintain our competitiveness."

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A winning collaboration

The collaboration with Tornos helped pave the way for Wuxi Fortune to become the exclusive, worldwide supplier of a diesel injector pin shaft to a leading automotive technology player with 2018 sales totaling approaching 80 billion Euros. The 23 mm-long part

has a maximum outer diameter of 9 mm and a minimum groove diameter of 1.3 mm, and requires a tolerance of plus/minus 0.03 mm of the outer diameter. "Tornos wouldn't let us face a brand new machine and all of its challenges alone," says Jian Wang. "They quickly delivered the machines and helped us produce the sample part. In addition, Tornos supported us in finishing the required quality inspections and smoothly passing our customer's evaluation. From the first contact between Tornos and Wuxi Fortune to confirmation of the processing solution at the early stage, it took only about two months."

It isn't easy for a new supplier to become a certified part manufacturer for a leading supplier to the automotive industry. That process can normally take up to two years but we were able to help Wuxi Fortune cement a relationship with just such a customer within one year. "This is really impressive," says Jian Wang. "Our partnership with Tornos has built a solid foundation for our development and expansion in the future."

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Based on a welcome initiative of the French Tornos subsidiary and under the guidance of Patrice Armeni, head of Tornos France, this project enables every customer to directly find the optimum solution perfectly matching their specific needs – on their own premises and with their own machine inventory. Supported by Olivier Rammelaere, head of the Tornos Academy, this project strikes by its simplicity and elegance. This time, Tornos literally places its service at the disposal of its customers by on-the-spot support, evaluation of the situation at hand and immediately taking the required measures. And what's best, the Tornos staff can be ordered via a simple and intuitive interface from your smartphone or PC.

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Thanks to the judicious advice from real experts in the field of machining, every entrepreneur can enhance their productivity and always select the optimum machining conditions. Whether it's about reducing the cycle times, enhancing tool life, or even meeting the tolerances, the Tornos staff enable you to save time and, most importantly, money. Tornos is always trying to harness the potential of all your machines during the machining of parts.

No matter whether you want to improve your profitability, produce new parts or embark on a new technology, Tornos will help you with profound knowledge and practical expertise in the field of machining. By adopting this philosophy, you will certainly produce your parts in the most optimal way.

A response to the lack of a skilled workforce

This initiative can also provide you with the qualified staff you are lacking. It is an undeniable reality that

the industrial world has trouble finding qualified staff that are able to perform certain operations on the machines. When it comes to facing such challenges, Tornos will also be by your side by offering its 'turnkey' assembly and set-up service. With the aid of the Tornos team of specialists, you will be able to bring your production to a higher level.

At the moment, this project has primarily been developed for France, it will be very easy, however, to implement it in any other region around the world, too. No matter where you are, you can call on Tornos to consider a set-up solution with the aid of qualified staff. Do not hesitate to contact Tornos and describe your problems. Together, we will find an appropriate solution in total confidentiality. Tornos will promptly make you a customized offer.

For French citizens, it should be noted that, thanks to our instructor agreement, you can seek care from various French government agencies, in particular from ADEFIM and OPCAİM.

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Numerous visitors and interested parties flocked to the Tornos stand at the 38th CIOSP exhibition in São Paulo, Brazil, to discover the SwissNano 7.

Tornos turns heads at CIOSP 2020

in São Paulo, Brazil

With the mission of constantly innovating and exploring new markets, Tornos seized the opportunity—almost at the drop of a hat—to showcase its Medical & Dental solutions to the booming Brazilian market at the 38th Congresso Internacional de Odontologia de São Paulo (CIOSP) in Brazil.

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Industrielle 111
CH-2740 Moutier
Switzerland
Tel. +41 32 494 44 44
contact@tornos.com
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The event took place January 29–February 1, 2020, in front of an audience that was attentive and receptive while discovering the brand new SwissNano 7 for the first time on Brazilian soil.

Sometimes all it takes is the right opportunity and the right contact for the magic to happen and that's exactly what happened for Tornos at CIOSP, an event that had not been in the group's 2020 forecasts. Naiane Nunes, General Manager at Tornos Technologies United States (TTUS), was recently given the mission to develop the Brazilian market, and as a native of Brazil, it's a market she knows well. One thing led to another, and she established a contact with the Brazilian Chamber of Commerce—a contact which proved particularly fruitful, as it enabled her to present Tornos the 38th CIOSP, the largest dental event in South America and the second largest dental event in the world.



A targeted approach aimed at an informed public

"Brazil is a country of contrasts," says Naiane Nunes. Indeed, it is a perpetual mix of luxury and poverty. It is in against this backdrop that a booming and particularly strong health care market is emerging in Brazil. With their increasing purchasing power, Brazilians do not hesitate to seek care and to treat all parts of the anatomy, and there is an especially strong focus on dental care.

"Brazil has no less than 330,000 dentists and the quality of the services offered is excellent. Many patients from all over the world come to Brazil for dental treatment, Brazil is renowned for the quality of its dental implants and excellent aesthetic appeal," says Naiane Nunes.

An established meeting place for professionals

During the four-day CIOSP, dentists, medical professionals, and pharmaceutical companies met in São Paulo to discuss, demonstrate their expertise, and share their knowledge. The event focused on the dental industry, but also included equipment, components, dental implants and even the most delicate surgical products.



Michael Hauser, CEO of Tornos (left) with Naiane Nunes, General Manager of Tornos US, Bruno Allemand, Head of Sales & Marketing and Daniel Moura.

By participating in the congress, Tornos made history as the first machine tool manufacturer to ever present a machine in an exhibit booth. As Tornos had a relatively small exhibition space, it chose to showcase the brand-new SwissNano 7, a machine that is emblematic of the dental industry. The SwissNano 7, which had never before traveled as far as Brazil, was a real crowd pleaser throughout the congress.



Well-received lectures and presentations

Recognizing CIOSP as a unique opportunity to take Tornos and its game changing SwissNano 7 directly to Brazilian dental industry influencers' doorsteps, Naiane Nunes spared no effort.

"As I know a lot of dentists, I spoke to the best professionals and invited three experts from the field in turn to come and speak about our machine and features at our booth," she proudly explains.

"Dr. Danilo Maeda Reino, Dr. Fabiano and Dr. Alana Souza took the floor and explained the manufacture of an implant and the importance of a machine like the SwissNano 7 in this respect. The scientific expertise of Dr. Danilo Maeda Reino was particularly appreciated by the audience."

Numerous contacts were made during the congress and Tornos' contribution was very much in evidence as it was mentioned across than 40 channels including specialist media and social networks.

We also counted with a spectacular local team whom succeeded to excel on showcasing our machine and Tornos. This daring initiative was made possible by the enthusiasm and unfailing motivation of Nunes in her role as head of the Brazilian market, and it provides even further evidence of Tornos' customer promise: We keep you turning.

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Tornos engineers combine technical skills with an open mind.

Specific developments from Tornos, tailor-made

for customer requirements

For some time now, we have been presenting in our decomagazine, the advancements from our engineers on the development team and its special tasks. All the solutions we have developed tend to have one thing in common, the desire to customize the machine for the end-user.

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Industrielle 111
CH-2740 Moutier
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Tornos is capable of offering machines that cover the full range from simple machines like the Swiss DT, the medium-range machines such as the Swiss GT and through to high-end machines like the EvoDECO or SwissDECO. All offer optional equipment offered by Tornos largely to meet the standard customer requirements, but the customer needs may be so unique that a tailored solution must be developed for the customer for him to be able to optimize his production or to machine a specific workpiece. This development capacity is backed by a team of highly motivated, creative and skilled engineers. Here, we will introduce in greater detail the mission of our engineering team in this article.

A window to the future

According to Fabien Chaillet, head of the Tornos development team for special tasks, the development of a customized solution is always challenging.

"As a matter of course, you don't only need technical know-how, but also an extremely open mind to be able to find solutions that complement our industrial standards. As mentioned above, there is a large variety of types of customization."

"We are facing various requests from machine users who want to increase their efficiency. To meet their requirements, we can install a measuring system and realize automatic offset compensation, optimize the machining processes with the production of specific tool holders, develop processing and collecting systems used to recover precious metals in the machining zone, provide part collection systems for subsequent palletizing or even offer customized cutting oil treatment systems. We enjoy accepting the particular challenge and always collaborate with the most suitable partners to achieve the perfect balance between quality and efficiency."

"Beyond this challenge, the customized developments provide the opportunity to evolve the products of tomorrow, both in our field of activity and in those of our customers. We can thus open-up the window to the future which is characterized by highly complex and competitive markets. To make themselves stand out from their competitors, our customers are constantly trying to optimize the productivity of their production processes; this is one of their major challenges."

"Tornos offers a comprehensive range of machinery with a vast range of optional equipment for all needs. The capability of highly customizing a machine with comprehensive optional equipment sets us apart. The most recent technical developments, especially the abundance of internal numerical features and the open computer-based OPC UA interfaces enable us to now incorporate even more advanced technologies in our standard machines."

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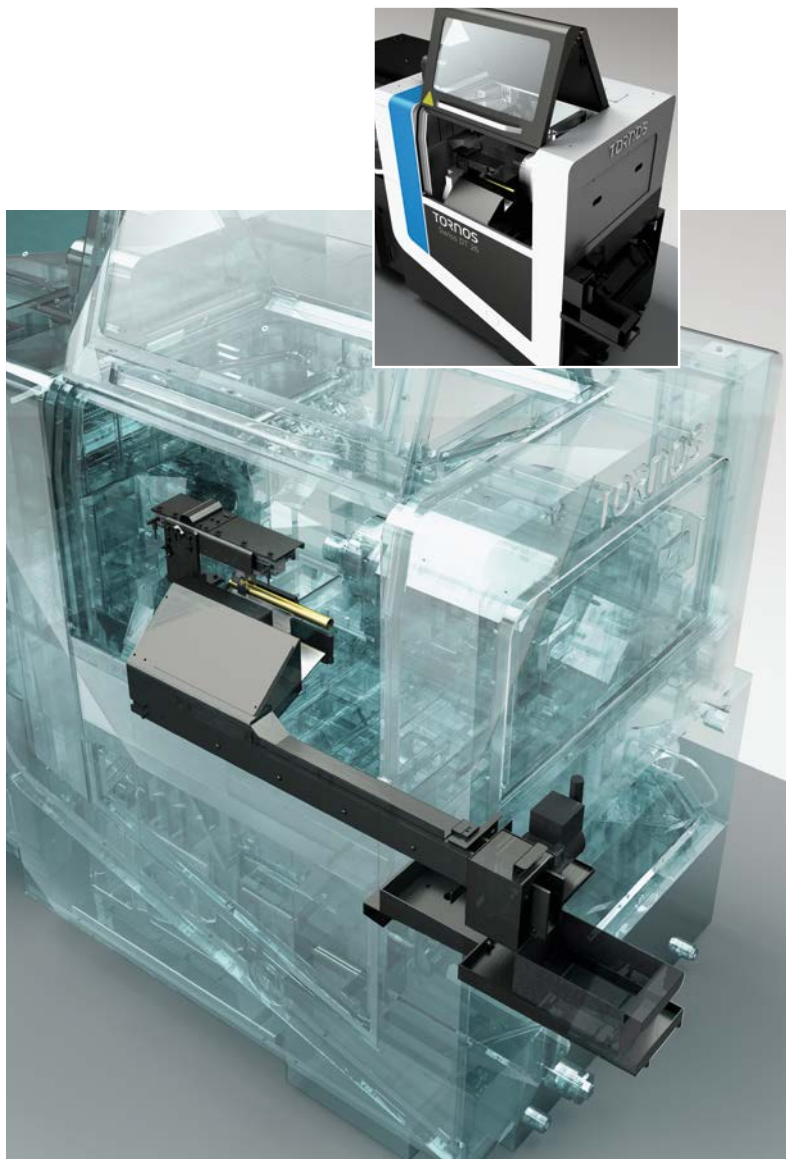
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Whether you are producing a special parts outlet on the Swiss DT 26 or a centrifuge filtration system on the MultiSwiss, Tornos' team of specialists is at your service.



Open-mindedness and corporate values

Audacity and open-mindedness are fundamental values at Tornos. These values are reflected in customized development. The latter is based on the idea of exactly understanding the customer's needs by visiting at their premises for the exchange of ideas and views for the final proposal of an efficient and sustainable solution.

The development engineers in charge, not only design a suitable solution but actively participate in its subsequent integration in the machine tool. They proceed with the various validation steps and remain the main contact for all company services throughout the project period. This approach also aims at guaranteeing a fast response and thus managing the most efficient development of the required solutions. The Tornos engineers are on-site and therefore familiarized with the production problems at hand;

the solutions developed by them are always expedient. The expertise of these engineers is also sought for the in-house development of new products. They, therefore, are familiar with the requirements of the machine tomorrow.

Are you facing a challenge and you want us to meet it for you? Our development team for special tasks will be pleased to help you, so do not hesitate to contact us.

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All Swiss Precision Machining employees share the same passion for quality, which is the basis of the company's success.

SWISS PRECISION MACHINING INC.:

New MultiSwiss machines help key partner progress their Medtech turning

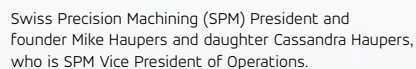
As changing demographics, an aging global population and technology and innovation transform the medical technology sector, Wheeling, Illinois (US)-based Swiss Precision Machining (SPM) Inc. counts on Tornos technologies in its legendary pursuit of excellence. As a key supplier to the Medtech industry, SPM's recent acquisition of two new MultiSwiss machines advances its legacy of precision and boosts its productivity at the same time.



Swiss Precision Machining Inc.
634 Glenn Ave., Wheeling
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US
Tel. 847 647 7111
Fax 847 647 7110
sales@spmswiss.com
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Much has changed since Mike Haupers founded SPM in 1979—when gasoline was just 88 cents a gallon and a newspaper cost just 20 cents—with just two machines and two employees. Mike Haupers, the son of an instrument maker specialized in dental instrument making, and acclaimed for his “magic hands,” grew up in the business and so have his daughters. Today, Cassandra Haupers is SPM’s Vice President of Operations, and Jennifer Adair is the company’s Quality Assurance/Continuous Improvements Manager.

“My dad started out manufacturing dental components, then people started hearing the name and recognizing the quality and competitive pricing, and SPM became a job shop,” Cassandra Haupers explained. “Manufacturing has been in our family for



three generations. My sister, Jennifer, and I started working at SPM in high school. When I was in college, I worked two days a week in the office and I ran the machines for an entire summer. My dad taught me how to tackle challenging parts, and I understand what it means when equipment is down."

Cassandra Haupers and her sister come by their dedication to the family-owned company natural, each bringing her own skillset to its service and the service of customers.

"My dad is the boldest and most daring businessman I have ever met," Adair said. "He takes risks and knows he will fail at times, but look at what he has created. We didn't grow up as your ordinary girls with him. We were taught how to use tools, fix things and

put them together, how to make things and never rely on anyone else: Always carve out your own paths. I have always had an eye for spotting imperfections and always want things looking their best. I am just lucky enough to get to do this on a daily basis with a team of 140 people that I get to call my second family."

That passion for quality underpins SPM's success and its reputation among customers.

"Our reputation in the industry is that SPM is a 'go-to' company. Customers know that we produce quality products at a competitive price," Cassandra Haupers explained. "In order to do this, we are creative and push our machines by using unique attachments. There have been multiple times when we've had visitors say, 'What you do on your Swiss machines definitely pushes the envelope, and it's amazing.'"

She says SPM was built on Tornos cam machines, including the R10, R125, RR20, MS7, and T4.

"Back when SPM started 40 years ago, Tornos had a reputation of quality and precision—two values that SPM lives by. Still to this day, Tornos builds quality



machines that hold precision tolerances and has the support needed," she said.

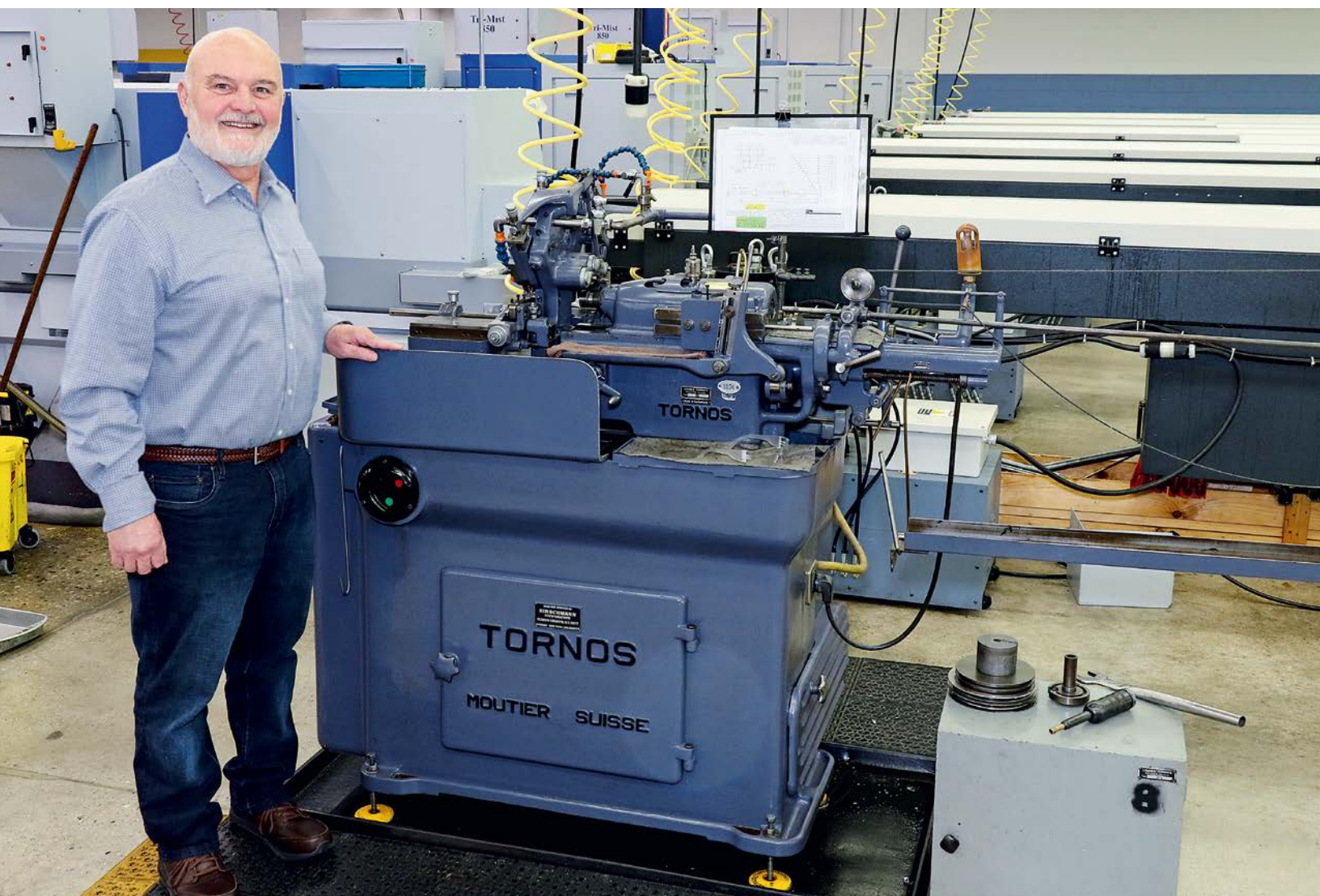
That alignment of values is the foundation of SPM's relationship with Tornos, she said.

"SPM recently purchased two MultiSwiss multispindle machines from Tornos," she added. "When core values align in companies, there's no doubt that a partnership will flourish—and that's what's happening here with Tornos."

The MultiSwiss range, launched in 2011 when multispindle technology was still considered extremely complex, is renowned for its superb ergonomics and machining performance. SPM counts on its MultiSwiss machines to machine parts for robotic surgical operations.

"We knew that the quantities in demand for medical parts were increasing considerably," Cassandra Haupers said. "To stay competitive, we needed a machine that could stay up with our customer's demand, could produce a quality part, and allow us to charge a price to compete globally. The Tornos MultiSwiss was our answer."

The MultiSwiss answers that concern and more. Featuring mobile spindles with Z axes, barrel indexing using torque motor technology, and a container housing all of the peripherals needed for machine operation, these solutions position SPM for success well into the future. Marking a departure from conventional multispindle machines, the MultiSwiss range bridges the gap between





single-spindle and multispindle machines—and onboard technology means a MultiSwiss can deliver cycle times equal to those of cam-operated multispindle turning machines.

A key differentiator between SPM and its competitors is its willingness to invest in anything that will help the company improve product quality. Another differentiator is the company's focus on aesthetics: Even when aesthetics aren't on the blueprint, SPM knows that doctors and dentists want instruments that are not only functional but pleasing to the eye. With this commitment to both quality and aesthetics, SPM produces parts and instruments that their customers can't get anywhere else.

"We chose the Tornos multispindles because we know that Tornos will keep us turning," Cassandra Haupers said. "There are a few product lines SPM manufacturers that grew in tremendous quantity. However, we needed a machine that could achieve a high rate of production while producing quality parts. We knew Tornos could do both."

SPM's new MultiSwiss 6x16 and MultiSwiss 8x26 will produce parts for a robotic surgery platform.

"These parts require tight tolerances being held up to $\pm .0005$. The challenges these machines help us overcome are the ability to produce highly sophisticated components, at a high production rate, resulting in a competitive price," Cassandra Haupers added.

With the global medical device manufacturing market poised to exceed \$600 billion by 2025, SPM is ready with an enthusiastic and highly skilled workforce, an 82,000-square-foot facility, 90 of the latest CNC machines running six days per week on two shifts—including those two new MultiSwiss solutions delivering on Tornos' brand promise: We keep you turning.

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A Tornos SwissNano 7 machine is shown in a gym setting. The machine is white and black, with a transparent protective cover. It is surrounded by gym equipment, including a punching bag hanging from the ceiling and a barbell on the floor. The background is a textured wall with a warm, orange glow. The machine has a control panel with a screen and buttons. The text 'TORNOS SwissNano' is visible on the machine's body.

*Someone has been
working out*

SwissNano 7

We keep you turning