

deco magazine



100th issue | *Thank you for your loyalty!*

*SwissNano:
Welcome to
generation X*

10

*The partnership
between damping
specialist Suspa and
Tornos: a natural
choice*

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*Elos Medtech:
Success built on
trust*

32

*Nicomatic:
Providing the
customer with
added value!*

44



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Tornos opened its new factory in Kąty Wrocławskie (Poland) on Tuesday, May 24, 2022.

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DECO MAGAZINE

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*"When you look to the future,
it is often wise to remember where you
came from: your past, your roots"*

Michael Hauser CEO of Tornos

UNE AVENTURE EXALTANTE

ALLE KINEMATISCHEN VERSIONEN

Our 100th decomagazine edition celebrates Tornos and its legendary know-how

Michael Hauser CEO of Tornos

When Tornos-Bechler launched its first decomagazine in the spring of 1997, we had no idea what our company's customer magazine would become some 25 years later! Since that first bilingual (French and German) version, the decomagazine has evolved significantly: It is now translated into a total of eight languages and is distributed worldwide. Every three months, we send news from Tornos—and our customers—to the four corners of the world. Of course, the magazine includes articles about our machines well as success stories featuring customers who are proud to work with Tornos and testify about their experience with our machines and everything our solutions help them achieve.

In the editorial in the inaugural decomagazine in 1997, Francis Kohler, then Sales Manager of Tornos-Bechler predicted a bright future for this unique magazine, but he certainly did not imagine the success that it would enjoy in the world of bar turning. As he emphasized in the last lines of his introduction, "the magazine you have in your hands is intended to be a real forum. It should become a meeting point for DECO 2000 designers and users, perhaps offering a different view of this profession of bar turning that we are so passionate about."

The passion for bar turning has not changed, even though our machines have evolved considerably and our portfolio today offers a complete range of bar turning solutions, from the installation and setup of new machines and the appropriate training from

the Tornos Academy— on the customer's site or our own premises—to after-sales service which plays an essential role by reacting quickly and efficiently at all times. In this regard, let's note that in this 100th edition we present our new factory in Kąty Wrocławskie, Poland, which we inaugurated in May 2022. This factory is entirely dedicated to the restoration of old machines, with the DECO 10 in the lead: It is in Kąty Wrocławskie that customers' DECO 10 machines are transformed into improved and completely renovated DECO 10 Plus solutions.

Tornos Poland now has more than 40 trained employees who know the machines inside out and are the undisputed experts in overhauling and repairing them. Most Kąty Wrocławskie employees work in the Tornos customer service department as after-sales technicians. They are dispatched worldwide to support customers on-site, delivering high-quality, efficient and effective after-sales service. Of course, service is not limited to solving technical problems and replacing machine parts. It includes the intensive and consequent administrative work for everything related to labor, all of which is actually performed by the Tornos Shared Services Center in Kąty Wrocławskie. Indeed, the Tornos Shared Services Center provides these valuable services for the benefit of Tornos sales companies and customers in Europe and, eventually, around the world, as you will discover in the article detailing the grand opening of our Kąty Wrocławskie factory.



decomagazine #1 1997 - cover and editorial



decomagazine #2 - 1998



decomagazine #26 - 2003



decomagazine #36 - 2006

Speaking of a different outlook, as it was mentioned in the first editorial, I can say that our outlook has constantly evolved. It has become even sharper over the years, and our resolutely modern approach enables us to draw on our solid and legendary know-how to offer our existing and potential customers the best of Tornos, at all times. It is in this spirit that we are offering you, our readers, the enclosed brochure as a gift on the occasion of this 100th edition of our decomagazine. By retracing the unprecedented industrial trajectory of Tornos, we are offering you our history—the history of an agricultural region that gradually industrialized until it became the international capital of machine tools. When you look to the future, it is often wise to remember where you came from: your past, your roots. We invite you to discover how Tornos has developed and how, in just a few decades, it has become an absolute reference in the field of bar turning.

We are particularly proud of our heritage and hope that this historical brochure will reinforce the fact that trusting Tornos is the right choice and always a guarantee of quality. We look forward to continuing to make history with you, with our new machines—including our brand-new SwissNano 10, a precision jewel like no other—taking center stage.

We thank you for your loyalty and for the trust you place in Tornos day after day.

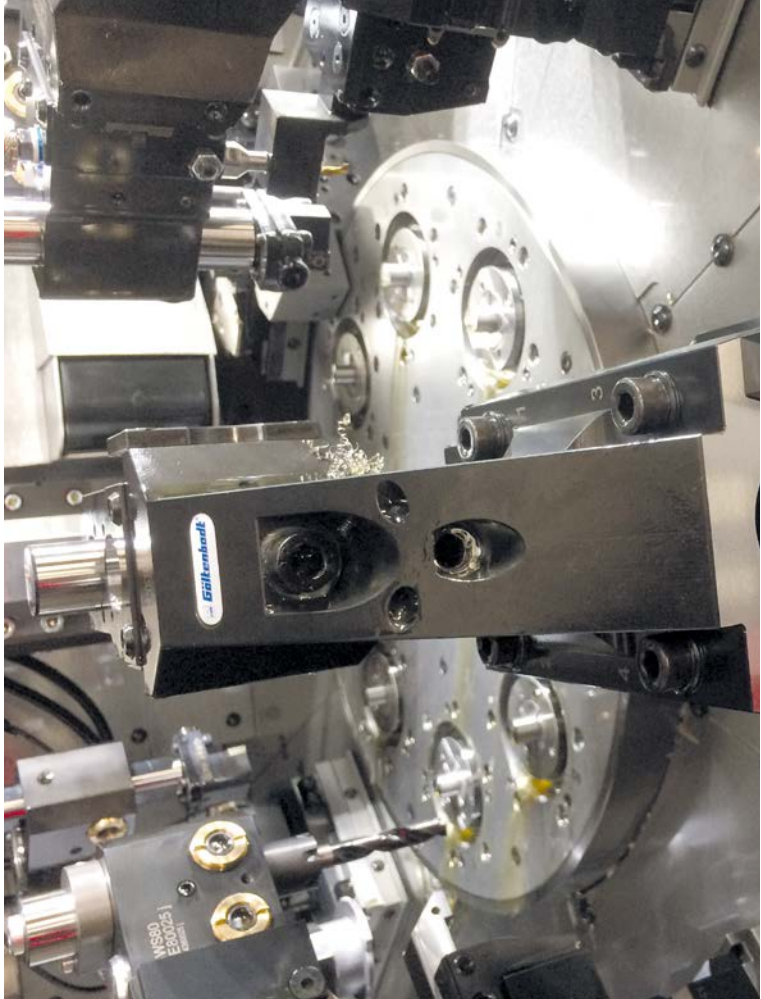


decomagazine #46 - 2008



decomagazine #64 - 2013

decomagazine #87 - 2019
A new format since 2017



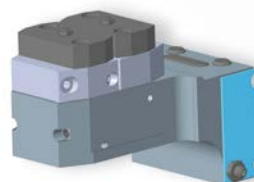
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- GWS80 interface for static tool holders for axial machining in conjunction with hydraulic expansion clamping facilities
- Coolant supply with max. 80 bar



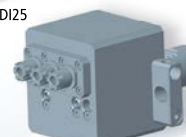
GWS-change holder static
2 hydraulic expansion units,
Ø 20 mm (reducible)



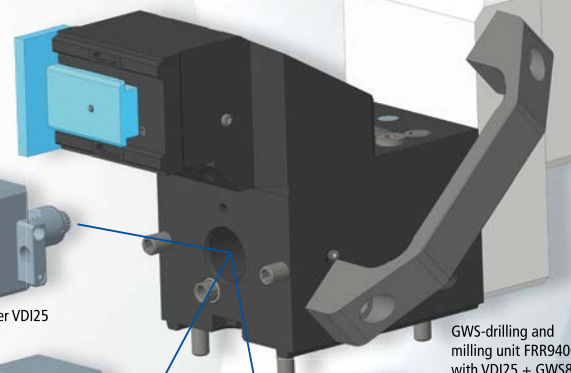
GWS-change holder VDI25
1 driven ER16



GWS-change holder VDI25
2 driven ER16



GWS-change holder VDI25
3 driven ER8



GWS-drilling and
milling unit FRR94002
with VDI25 + GWS80



GWS-base holder
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The precision machining solution with

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191

neo

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SIMODEC

La Roche sur Foron, France - March 8/11

TGOLD

Vicenza, Italy - March 17/21

SIAMS

Moutier, Switzerland - April 5/8

GTMA

Limerick, Ireland - June 15/16

OMTEC

Chicago, USA - June 14/16

EPHJ

Genève, Switzerland - June 14/17

IMTS

Chicago, USA - September 12/17

AMB

Stuttgart, Germany - September 13/17

MICRONORA

Besançon, France - September 27/30



Performance has a future



SAY HELLO TO THE
New SwissNano 10
THE PERFECT 10

SWISSNANO:

Welcome to generation X

Bolstered by the success of the SwissNano 4 and its big sister, the SwissNano 7, Tornos has decided to further extend the SwissNano range with the launch of the SwissNano 10. As its name indicates, the machine now has a 10 mm capacity, enabling the scope of available workpieces to be expanded even further. Workpiece lengths of up to 100 mm can now be machined.

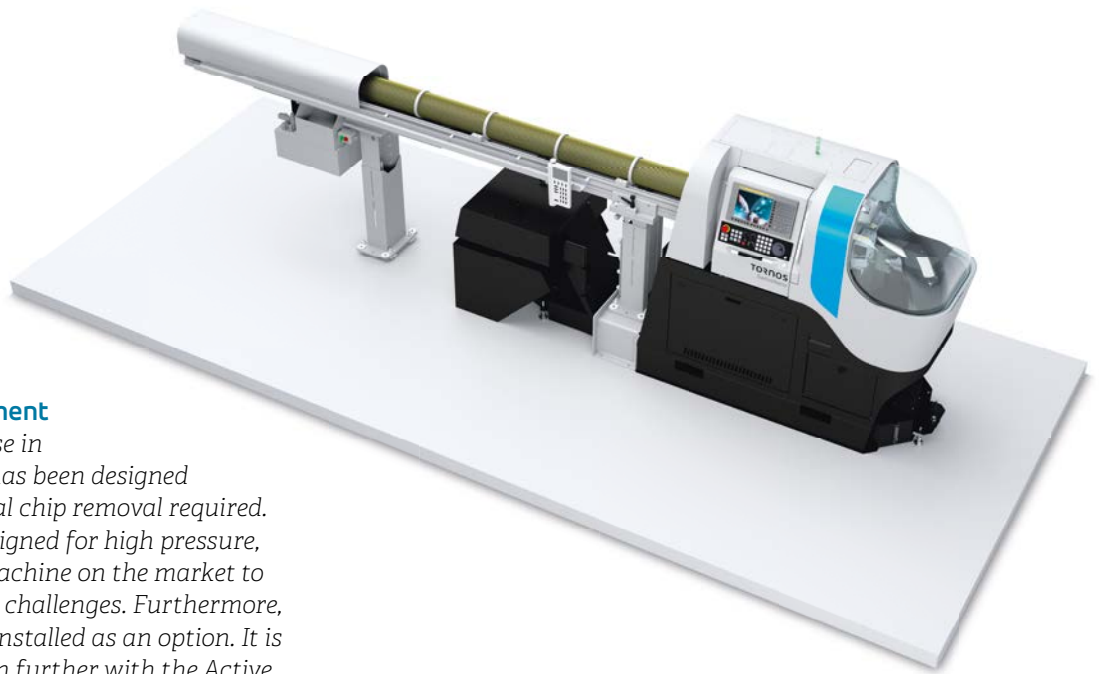
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Exceptional kinematics

The SwissNano range undeniably has the best kinematics on the market. Compact and efficient, the machine is incredibly straightforward to set up. The design of the machine allows the operator to work opposite the back spindle to facilitate setting and centring operations. The most unusual part of these kinematics is undoubtedly the counter spindle that uses three numerical axes. This makes counter spindle centring operations much easier. The machines' spindles have fully optimised motors. In the workshop, these motors allow both energy consumption and heat dissipation to be reduced. If the workshop is air-conditioned, this will result in lower energy bills. To hone the thermal properties, the spindles are equipped with a built-in cooling circuit. The spindles and the rotating guide bush are equipped with ceramic bearings to allow the machine temperature to be optimised.





Optimal chip management

To cope with the increase in diameter, the machine has been designed to manage the additional chip removal required. The SwissNano 10 is designed for high pressure, allowing the smallest machine on the market to tackle the most difficult challenges. Furthermore, a chip conveyor can be installed as an option. It is possible to take this even further with the Active Chip Breaker Plus (ACB Plus) software, which allows you to improve and guarantee the autonomy of your process.

A machine primed for optimisation

The configuration of the SwissNano 10 can be adapted at any time, with a huge range of options available with the machine. These options are unique to the market. Just like the SwissNano 4 or 7 model, the SwissNano 10 is designed to optimise production. Compact and economical, it offers impressive machining results. The SwissNano machine also has very short thermal loops and offers great stability, making for flawless production, often from the first part. Its highly rigid frame guarantees excellent finishes and reduces tool wear by 30 to 50% under optimal conditions.

The machining area has six linear axes – three main operation axes and three secondary operation axes.

This configuration is found on the SwissNano 4 but, as on the SwissNano 7, the tools are arranged differently:

- For main operations, the first platten offers three positions for driven tools.
 - A frontal tool holder for 4 tools can be added under the counter spindle.
 - For secondary operations, the machine has four tool positions, two of which can be motorised.
- It is also possible to add high-frequency spindles for Torx-type micro-milling operations.

The machine's strength lies in its modularity; it can be adapted to numerous markets. For example, in the medical and dental sectors, a thread whirler and a radial drill, or an angle tool post with two frontal tool holders, can be added.

But the SwissNano 10's flexibility is not restricted to the medical sector. The machine is also equipped to service the electronics industry. A polygon tool can be installed for both main and secondary operations to boost capabilities. The SwissNano 10 also enables the range of machinable watch parts to be expanded compared to the SwissNano 4. A gear hobbing device can be added for both main and secondary operations, enabling high-added-value parts, for example, a sliding pinion, to be produced very easily, whilst expertly managing chip removal.

Contact your nearest Tornos representative for further information.

tornos.com



Leading international guitar manufacturers rely on Schaller machine heads.

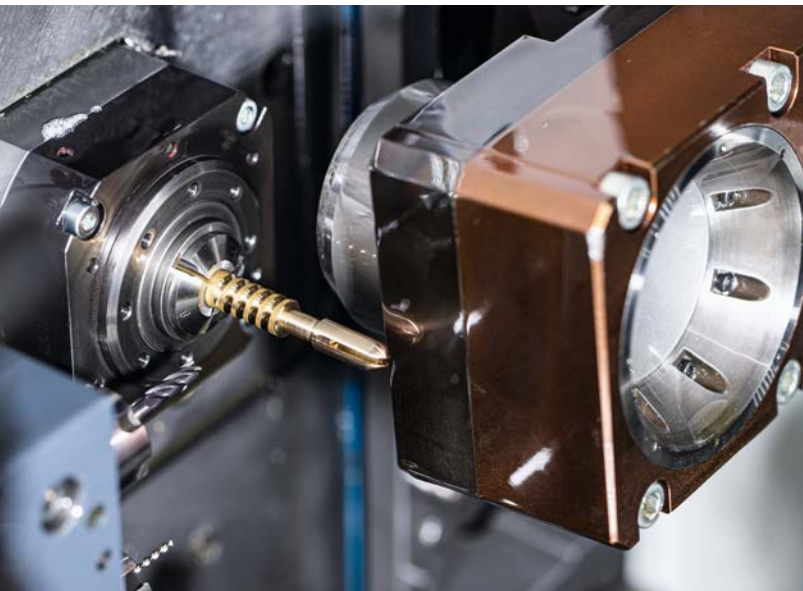
SPECIAL THEME

Whirling for

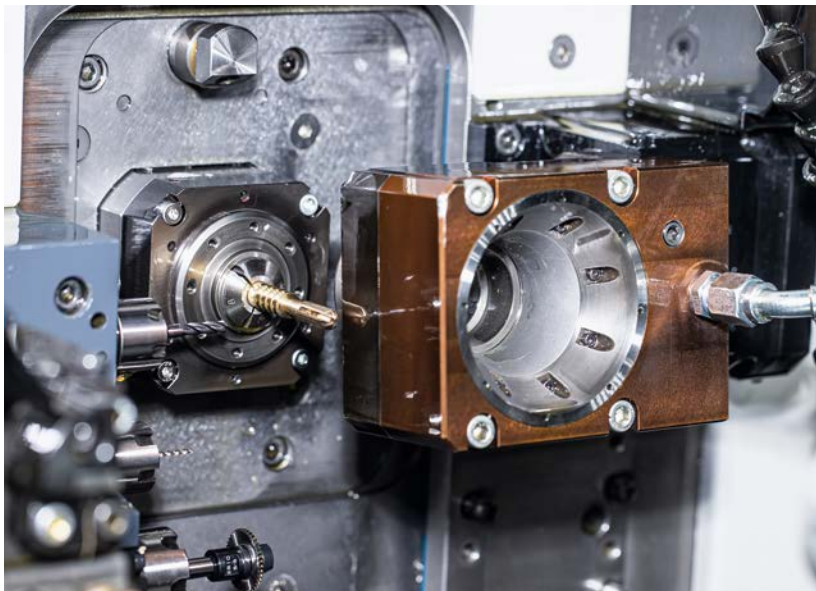
excellent sound quality

Music makes people happy one moment and can bring them to tears the next. It can help drive people to peak performance in sports, or make them anxious. But one thing that music never does is leave you cold. And the guitar evokes more emotion than virtually any other instrument. Whether around a camp fire or at a rock concert in a stadium, the way guitars work is always the same. Schaller GmbH, based near Nuremberg, has been dealing with the functioning of this plucked instrument for over 75 years. During this time, the company has become the world market leader in guitar parts. With modern machinery, the team led by plant manager Dominik Weininger turns and mills the precise components required to produce excellent sound quality. It also relies on the internally cooled whirling system from Tübingen-based Paul Horn GmbH.

Schaller GmbH specialises in machine heads, bridges, tremolos and strap locks. Helmut Schaller founded the company at the end of 1945 as a repair workshop for radios and other electronic devices. In the early 1950s, he began to develop amplifiers and speakers for musical instruments. Through a business partnership with an instrument maker, Schaller began developing and manufacturing guitar parts. By the 1960s, Schaller had become one of the most prominent guitar accessories suppliers in Europe. The reputation of Schaller's machine heads in particular precedes it. The M6 machine head was the world's first fully enclosed and self-locking precision machine head.



Jet whirling has reduced the machining time for worm threads by half, raised quality and ensured an increase in tool life.



Since then, leading international guitar manufacturers such as Gibson, Ovation and Fender have relied on components from the Bavarian music factory.

Precise worm gears

The machine heads on plucked instruments are used to tighten and tune the individual strings. They are at the top of a guitar and have a transmission to ensure a high degree of precision when tuning the strings. Other important properties are ease of movement and stability due to the self-locking mechanism. The higher the precision of the components, the higher the quality. The transmission of the machine head uses worm gears, as these are the only gears to enable precise adjustment and reliable self-locking.

A central part of the machine head is the adjusting screw with the worm thread. Department head of CNC turning and milling Nicole Gawatsch saw potential for improvement in this thread. "We previously milled the worm thread with a side milling cutter. The machining time required was too long for us and we often had to take the part and re-clamp it by hand", Gawatsch explains. "We became aware of Horn's internally cooled jet whirling at AMB 2018 and immediately contacted our Horn sales representative",

Few instruments evoke as much emotion as the guitar.

continues plant manager Weininger. Initial discussions with Horn about the new whirling system and the start of the project quickly followed.

The first whirling system with internal cooling

With the jet whirling system, Horn launched the first whirling tool to feature an internal coolant supply. This whirling system offers optimised cooling directly at the cutting edge and was developed by Horn in conjunction with W&F Werkzeugtechnik. The major challenge was to bring the coolant directly to the cutting edge in a confined space and to do this at high whirling speeds. The cooling channels partially integrated in the insert seat direct coolant to each

cutting edge. In addition, the coolant flows through the chip space. By cooling the cutting edges directly, this system enables long tool life to be achieved. What's more, when used in conjunction with the stable whirling unit, the system achieves better surface quality on the workpiece. Thanks to the patented W&F interface with its face-and-taper contact system, the whirling head boasts high changeover accuracy and is easy to exchange with just three screws. The internal coolant supply reduces the risk of chip build-up between the cutting inserts, which offer radial and axial run-out of 0.003 mm (0.001"). The maximum speed is 8,000 rpm.

The first tests at Schaller were not an instant success. "The problem was that the coolant pressure of the machine was too low. The whirling unit requires a high coolant pressure for satisfactory operation, but the machine only delivered a low pressure", explains Horn sales representative Peter Rümpelein. After producing 20,000 parts, the bearings of the whirling unit had to be replaced due to insufficient cooling. Nicole Gawatsch then moved the whirling process to a Tornos Swiss GT sliding-head lathe. The large pump capacity ensures the high coolant pressure is delivered. "The high pressure provides cooling and lubrication for the unit", says Rümpelein.

At AMB 2018, Horn introduced the world's first internal coolant system with its jet whirling technology.



“You only need
to change
the inserts for
different threads.”

Machining time halved

After a delayed start, the whirling process now runs reliably. “The whirling unit has been running 24/7 in the machine for over a year. We are very satisfied with the tool system”, says plant manager Weininger. The successful change in the process is also reflected in the processing time. Previously, Gawatsch needed about a minute to mill the worm thread. Conventional whirling takes 40 seconds. “With internally cooled whirling, we have halved the machining time to just 20 seconds per component. Given the incredibly high number of components we process each year, this is an enormous saving”, Gawatsch explains. In addition to the reduced machining time,

A successful partnership:
Peter Rümpelein (Horn) talks to Nicole Gawatsch
and Dominik Weininger (both from Schaller).



the surface quality of the finished components is also improved significantly. Moreover, the service life of the indexable inserts has increased many times over.

Only one version of the whirling head with insert seats for the type S302 indexable insert is used at Schaller. "We only need to change the inserts for the different threads", says Gawatsch. For whirling, the S302 system, which has three cutting edges, is mainly used at Horn. There is a high degree of manufacturing precision when it comes to grinding the cutting inserts. The three cutting edges are subject to a length tolerance of less than 0.005 mm (0.0002") when turned. This ensures the excellent concentricity of the entire system, the high changeover accuracy when indexing the inserts and the outstanding surface quality. "The cutting edge profile of the S302 system can be adapted to almost any special requests from the user, whether it's for single or multi-threads", explains Rümpelein.

The whirling method has been around since 1942 and hadn't seen any major developments for a long time. Conventional thread whirling is a method that is primarily used on Swiss-type lathes to produce bone screws, or on a large scale, to produce threaded spindles. To implement the process, a rapidly rotating whirling head is positioned in front of the guide bush of the Swiss-type lathe, eccentrically to the workpiece axis. The rotating workpiece is fed axially into the whirling head, which is pivoted to achieve the specified lead angle of the thread.



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INDEXABLE HEADS

Modular Swiss-Type Turning Holder

New System for Swiss-Type Turning
Machines with
Quick-Change Heads.
Features Minimum Setup Time.



Rotary Wedge Mechanism
Designed to Amplify
the Clamping Force for
a Rigid Connection

**Fast Setup
Minimizes
Machine
Downtime**

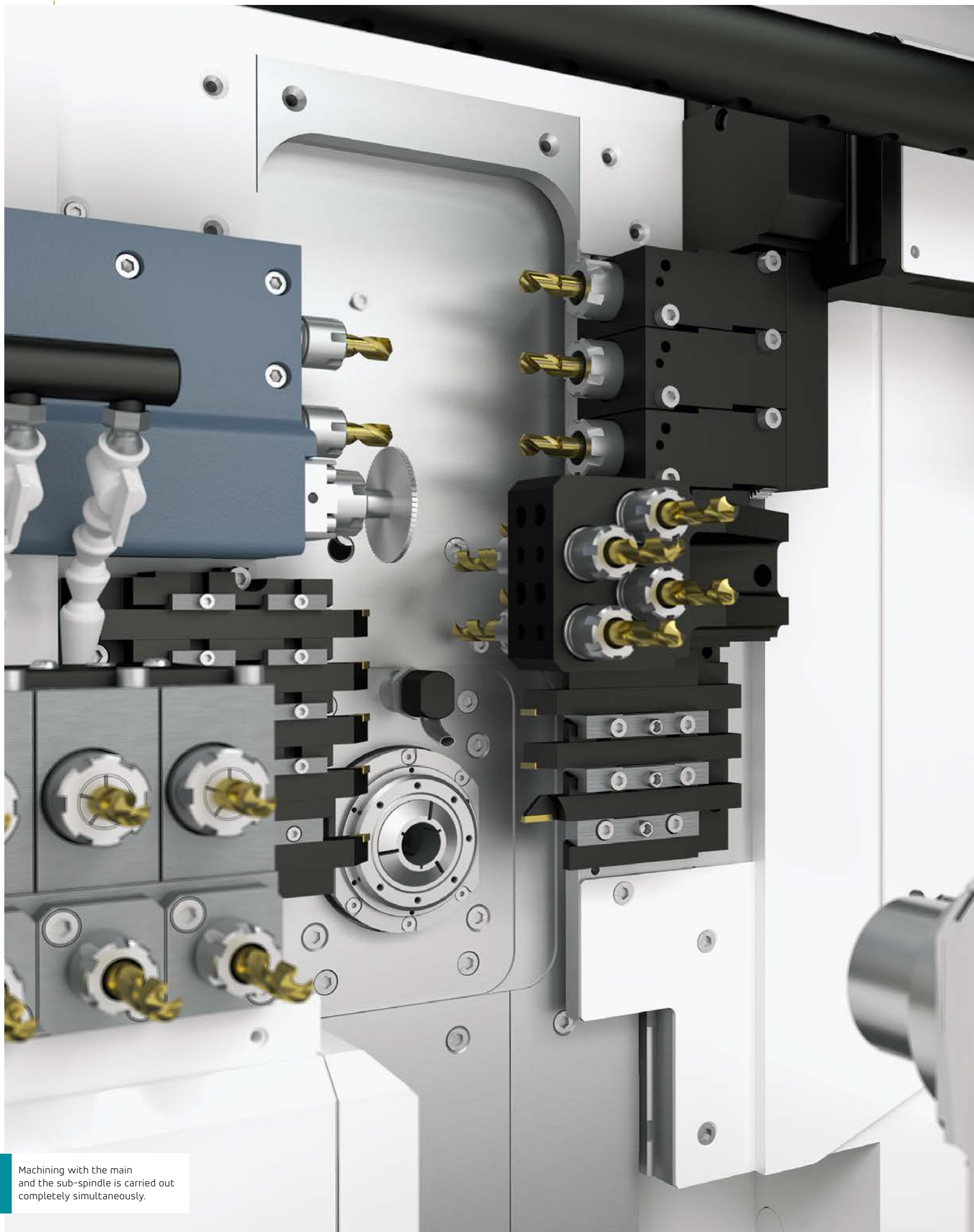


A Variety of **Right**
and **Left** Heads
Can Be Mounted on
the Same Shank



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Machining with the main and the sub-spindle is carried out completely simultaneously.

Tornos Swiss GT 13, Swiss GT 26 and Swiss GT 32

The perfect range

The Swiss GT range from Tornos:
Three machines with three diameters and an
almost infinite number of possibilities...

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A comprehensive range

The Swiss GT range is available in 3 diameters:

- **Swiss GT 13:** 13 mm
- **Swiss GT 26:** 25.4 mm
- **Swiss GT 32:** 32 mm

Equipped with kinematics comprising six linear axes, the operator can perform main and secondary operations with three numerical axes. The basic kinematics is equipped with three motors (two on the platten and one for secondary operations) to drive the numerous rotating tools.

Virtually anything is possible on Swiss GT machines: turning, drilling, tapping, milling, polygon operation, internal and external thread-whirling processes, gear hobbing, high-pressure drilling, stamping, broaching and the use of high-frequency spindles up to 80,000rpm. As with all Tornos machines, these machines can operate without a guide bush. The Swiss GT 26 and Swiss GT 32 can be fitted with a B-axis, making it possible to produce almost any type of part. Adding a B-axis transforms the machine into a true bar milling centre. The B-axis guarantees that any angle can be milled on the machine, simply by programming the CNC that can compensate for any mechanical angle settings.



*Adapted to the Swiss GT 13,
Swiss GT 26 and Swiss GT 32*
**Your cutting-edge tooling
solutions for main operations**



*Adapted to the Swiss GT 13,
Swiss GT 26 and Swiss GT 32*
**The solution for
counter-operation tooling**



*Adapted to the Swiss GT 26B
and Swiss GT 32B*
**Your advanced tooling
solutions for the B axis**



7



8



10



11



9

1 Cutting module

2 Thread-whirling unit,
5700 rpm max. Angle $\pm 25^\circ$
 $\varnothing 10$ mm max.

3 Polygon unit with maximum
of 6000 rpm
Polygon tool, $\varnothing 80$ mm

4 Rotating spindle for milling

5 Drilling/milling spindle
(offset 15 mm)

6 Double drilling/milling spindle
for B axis

7 Double drilling/milling device

8 ESX20 drilling/milling
spindle (offset 6 mm)

9 Thread-whirling unit
Maximum 5700 rpm
Angle $\pm 25^\circ$ $\varnothing 10$ mm max.
(except Swiss GT 32)

10 Slotting unit

11 Inclined drilling/milling device

A large number of tools are available

The Swiss GT 13 can be equipped with up to 30 tools, 12 of which can be driven. As for the Swiss GT 16 and the Swiss GT 32, they can be equipped with a maximum 40 of tools, 14 of which are rotating tools. In addition, a vast choice of devices and accessories are available with these turning machines. The B-axis version brings the number of driven tools to 16, giving a total of 36 tools.

A very high-performance tool station

The B-axis is supported by two attachment points to make the device more rigid and to allow it to handle the higher chip removal rates. Equipped with three rotating dual spindles (operations/secondary operations) that permit a maximum speed of 6000 rpm. This position proves highly effective for

performing milling and drilling operations in any type of material. As an option, it is possible to install a fourth rotating spindle or a high-frequency spindle.

Adding the B-axis transforms the Swiss GT into a true bar milling centre, with the B-axis guaranteeing that any angle can be milled on the machine simply by programming the CNC, which can compensate for any mechanical angle settings.

Boost your machine availability with ACB Plus

It is possible to add the Active Chip Breaker Plus (ACB Plus) as an option to the Swiss GT range. ACB Plus uses low-frequency technology, with this unique system enabling synchronised vibration of the longitudinal axes with the machine spindle. This action creates a brief interruption in the cut that



allows the chips to be ejected in a controlled way. In other terms, it is actually possible to manage chip production.

This technology opens up new machining possibilities. It is capable of tackling a large array of shapes and materials and is perfect for machining difficult materials such as inconel, stainless steel, copper and plastics. The technology reduces the risks associated with these materials, such as chip build-up, with ACB Plus both making processes more secure and improving machine availability.

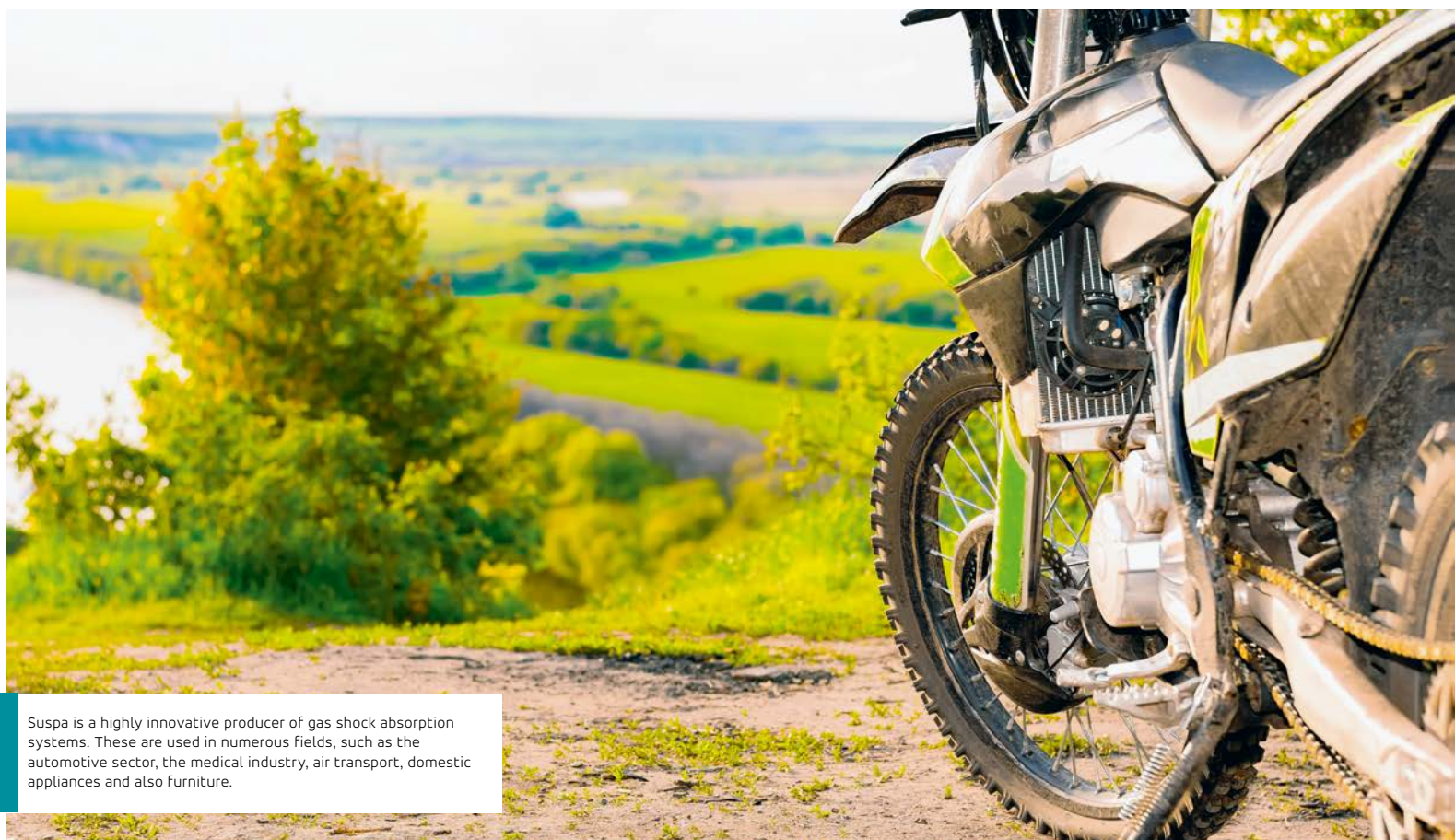
Complex programming? A thing of the past!

Like most new products from Tornos, the Swiss GT range is supported by the TISIS software, which is designed to fully simplify programming. Once the machine is virtually equipped with the right tool

holders, it is possible to define a specific geometry for each tool and simulate all or part of the program in 2D, call up the correct G-codes and to complete these with the correct values using the extremely user-friendly assistant. TISIS also allows the expert knowledge specific to the users to be managed. It is possible to save the operations specific to each user in a store, allowing them to be reused on other programs in an incredibly intuitive way. Furthermore, the software has a number of different production monitoring functions. This allows the machines to be networked. Do not hesitate to contact your nearest Tornos representative to discover the Swiss GT and the countless machining possibilities it offers.

tornos.com





Suspa is a highly innovative producer of gas shock absorption systems. These are used in numerous fields, such as the automotive sector, the medical industry, air transport, domestic appliances and also furniture.

The partnership between damping specialist Suspa and Tornos: A natural choice

This year, Suspa is celebrating its 70th anniversary. This is the perfect opportunity to look back at the fruitful partnership between Tornos and Suspa, a company that specialises in damping systems across all sectors, from vehicles and medical technology to the consumer goods industry.



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Lifting, lowering, tipping and damping - Suspa is one of the largest suppliers of development solutions and highly innovative systems. Its products are used worldwide and Suspa is also a global market leader for applications used in washing machines, and for adjustable hydraulic dampers. This means that Suspa is present in almost every daily activity, from domestic chores to travel.

Although its company headquarters are based in Altdorf in Germany – along with two other factories in Sulzbach and Rosenberg – the group also has an international presence with other factories located in the Czech Republic, the United States, China and India. Each year, Suspa produces around 100 million parts with 1500 part numbers. It employs 1900 staff worldwide to manage the flow and rate of this production.

Founded in 1951, Suspa (originally trading as Suspa Federungstechnik GmbH) initially began manufacturing spring struts for two-wheel vehicles. In 1959, Suspa invented a damping system for washing

machines which eliminated the irritating 'bouncing' and, just three years later, the company became the market leader. In 1964, the first products designed for the automotive industry were gas springs for opening and closing tailgates. Innovative and always in the process of conquering new markets, in 1969 Suspa developed a system for office chairs to adjust the height of the seat base and the position of the backrest. From 1973, Suspa grew its presence internationally, expanding the business in the United States and Asia.

Suspa developed silicone-damped impact absorbers for vehicles. In 1988, Suspa became the first manufacturer to move to a three-component water paint system, thus protecting the environment by not using solvents and amines. From 1991, Suspa focussed on developing height-adjustment systems for tables and work surfaces. In 1994, the company established a new subsidiary in India and in 1999, Suspa began mass production of spoiler adjustment systems and the company became a system supplier for the automotive industry. One year later, it produced its first crash management system and opened a plant in the Czech Republic. In 2003, the company expanded its production capacities in Asia.

At the Suspa site in Altdorf, the company's Head of Production, Adrian Lange, looks back at the long collaboration and the mutual trust established between Suspa and Tornos: "We took delivery of our 13th Tornos machine in 2021, and our 14th is set to arrive in 2022. We needed a straightforward system with short cycle times. The solutions offered by Tornos are great, they suit us perfectly."

"Our parts often need deep drilling and the EvoDECO machines enable us to do this very easily. The machining area is huge, and it is very easy to extract large parts from the machine. Suspa parts pose many challenges. We manufacture premium components, so the parts must be perfect. DECO and EvoDECO machines are fine-tuned to our requirements. Our DECO and EvoDECO machines enable us to obtain short production times thanks to their four independent tool systems and their multi-axis technology."

"Thanks to their kinematics and their modular machining area, these machines enable us to satisfy the most complex demands. For example, we produce steering dampers for the two-wheeler industry – these systems are increasingly high-performance and also require extremely precise parts."

"We needed a straightforward system with short cycle times. The solutions offered by Tornos are great, they suit us perfectly."

Although some parts are relatively straightforward, such as those used for applications in washing machines, those for the automotive industry are often much more complex and, as Adrian Lange is quick to point out: "With Tornos, precision is assured. It's an unwavering guarantee of quality. Tornos solutions are also reliable. With Tornos, we have always dealt with qualified specialists and experts who know how to respond to our needs quickly and competently."

For Suspa, quality is key. The company takes into account the ever-increasing demands of its customers, of society and the environment, as well as increasingly shorter delivery lead-times and the continually mounting pressure on costs, to guarantee continued success. Suspa's management system includes systematic and integrated quality control and environmental management, which involves the participation of all employees.

From left to right: Jürgen König, Head of Turning Suspa, Adrian Lange, Production Manager Suspa, Dirk Stiehler, Sales Engineer Tornos.



"We are aware that the quality of our services has a decisive impact on Suspa's success. Therefore, our contribution to our customers must consist of supplying perfectly flawless products which provide complete satisfaction," continues Adrian Lange. "In fact, by constantly improving our products and processes, and including all our employees in the continuous improvement process, we guarantee that Suspa will be competitive, today and in the future."

"Without doubt, the greatest challenge is maintaining our competitive edge with our customers. At all Suspa sites, the absolute priority is customer service and constantly satisfying our customers' needs. Aware of our corporate responsibility, at Suspa we are committed to social issues, engaging with local and regional activities."

Suspa's quality management system meets the requirements of the ISO:9001. All the sites that supply customers in the automotive sector also comply with the requirements of the IATF:16949 standards, as evidenced by the appropriate certification. Suspa pursues a strict policy in terms of quality and the environment.

It is this plethora of ingredients that contribute to the success of the company, which offers customers an especially discreet and incredibly effective service. These qualities are also shared by Tornos. This is why Suspa chose to partner with Tornos, and why it also wants to continue expanding its fleet of Tornos machines to offer the best and fastest service in the world responding to the various challenges in the field of damping, in all possible sectors imaginable.

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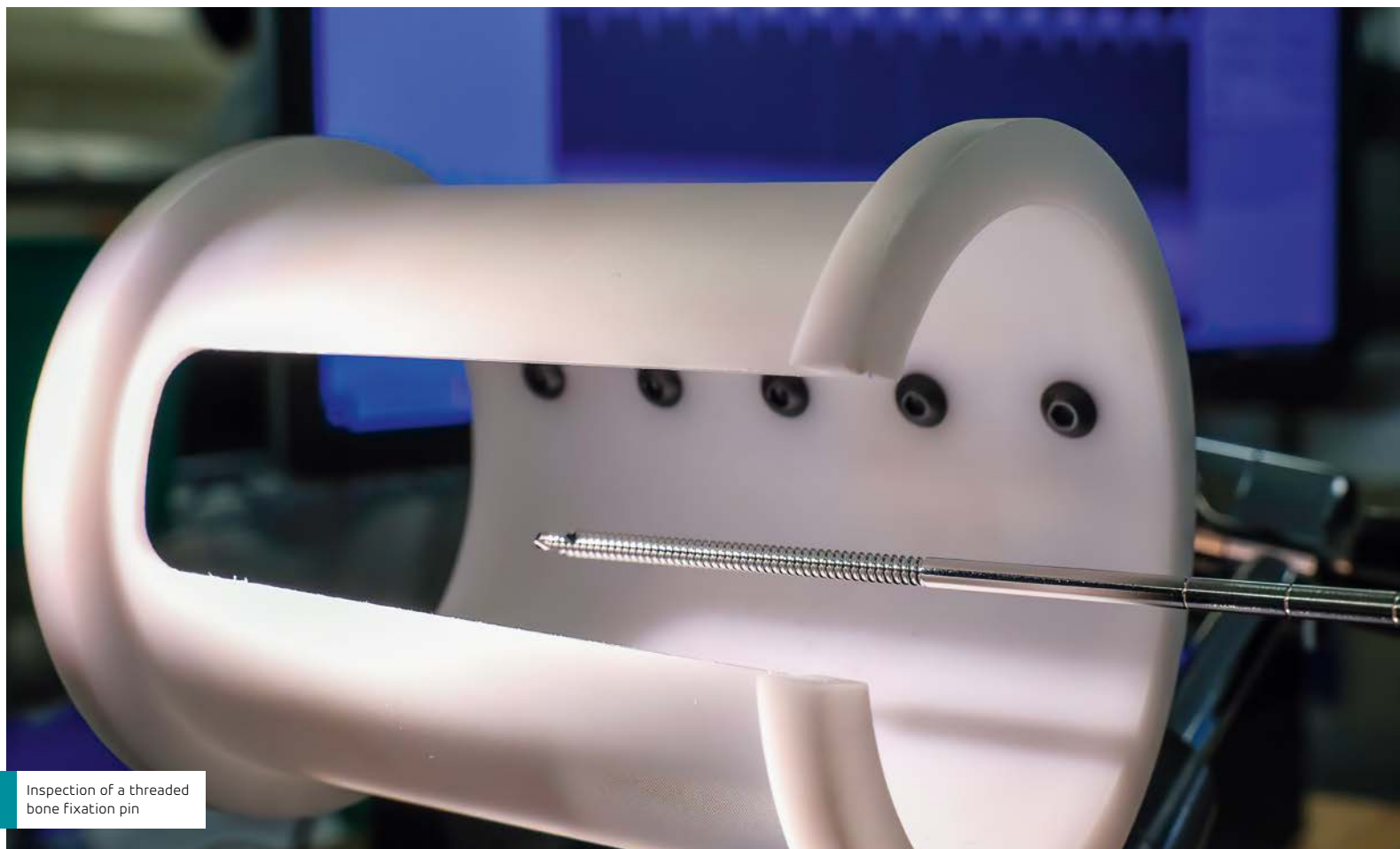
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Inspection of a threaded bone fixation pin



Jodie Gilmore, president of Elos Medtech's orthopedics division, and Chris Weeden, manufacturing engineer at the company's Memphis (United States) site.

Success built on trust

Just as patients put their trust in the tools used to treat their bodies, the creators of those tools put their trust in their suppliers. When it comes to the production of highly precise, high-value drills, taps, reamers, wires, and a variety pins and screws for global orthopedic companies, global medical device developer and manufacturer Elos Medtech puts its trust in Tornos Swiss-type lathes.



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Elos Medtech's strong commitment to quality excellence is clearly paying off: The company reported a 13.6 percent increase in net sales in the first quarter of 2022. Active in three primary markets—orthopedics, dental, and diversified life sciences—Elos Medtech has a particularly strong position in orthopedics and high technical competence in that market. Foresight, flexibility, responsiveness, and meticulous attention to detail are absolutely essential to the company's continued growth—and Elos Medtech is passionately committed to being the partner that goes above and beyond to meet these needs.

Its Tornos machine fleet makes a valuable contribution to that effort. Today, the Gothenburg, Sweden-based publicly traded company owns 60 Tornos Swiss-type machines and has two more—plus a new Tornos MultiSwiss multispindle machine—on order. Elos Medtech's Tornos machine fleet is spread out globally across three of the company's five sites, Memphis (United States) site, Timmersdala, Sweden, and in Tianjin, China.

“We want to make sure that we’re consistently staying ahead of the curve and employing the best and latest machine technology.”

Jodie Gilmore, president of Elos Medtech’s orthopedics division, explains that the growing company is laser-focused on staying at the forefront of technology.

“We never compromise on quality and are committed to quality excellence in everything we do. We want to be able to make sure that, not only with the competence of our people but also in the machine technologies we’re using, we have the best in machine technology. From a forward-looking perspective, we want

to continue to do that,” she says, noting that Elos’ Medtech’s five-year strategy includes the purchase of a significant number of Swiss-type lathes.

“We are growing significantly and within the overall company we are growth-focused and really investing to maintain that momentum—and orthopedics is definitely no exception,” Gilmore explains.

Made in Memphis with Swiss-type technology

At Elos Medtech’s second-largest site in Memphis, which typically produces 3 to 4 million orthopedic parts per year in batch sizes averaging 500 parts each, Tornos solutions play an important role. The majority of those parts are at some point machine on a Tornos Swiss-type lathe.





Chris Weeden, manufacturing engineer at the Memphis site, has relied on Tornos' Swiss-type lathes—today including two DECO 13s, a DECO 13 bi, seven DECO 20s, and 10 Swiss GT 26s—for more than 20 years. Those machines are put to the test daily in the production of precision products that must perform in a rigorous biological environment where they are subjected to significant loads.

"Most everything we make cuts, pierces, or fixates bone, and it's incredibly important that every part we make performs well, works the first time, and doesn't break," Gilmore emphasizes. "Of course, anytime you're in the medical device industry, customers want you to have significant expertise—not just saying, 'Oh, we can do this,' but the ability that we have demonstrated for decades."



Medical device companies want to work with suppliers that are best-in-class experts—and Elos Medtech more than meets that criterion.

"A company, for example, focuses on the total joint implant—the development and creation of the joint, essentially—and other key systems. Then we come alongside and support them in our areas of specialty," says Gilmore.



Coming of age with Tornos

Weeden came of age using Tornos machines—and he swears by them.

“I’ve been around Tornos Swiss-type machines for my whole career and I’ve always really, really liked them. They seemed to be way ahead of the curve early in the game. When I first started back in 2003, the Tornos machines just had so many more capabilities than some of the others on the market at the time, which drew our attention,” Weeden says. “The DECO 20s and DECO 13s allow you to support your work on the front while you are working on the last part on the back work.”

The DECOs’ capabilities make a big difference, he adds.

“I’ve been around Tornos Swiss-type machines for my whole career and I’ve always really, really liked them.”



"The DECO gives you so many options. It has so many capabilities that we can support things while we thread and while we work because the machine has independent access and gangs that allow us to do that. Since we run so many long cylindrical parts, supporting them is key to us," Weeden explains, noting that most of the parts machined in Memphis are stainless steel and range from 150 to 460 mm in length and up to 0.39 mm in diameter. "The DECO machine has met every need we've ever had. I've always liked the TB-DECO programming. You can write 1 program and then the TB-DECO software allows you to ask questions, so you could take 1 program and program 20 part numbers if they were in the same family."

Weeden is also a fan of Tornos' modular tooling.

"You mount your tool, and there's an external pre-setter in the holder provided," he says. "That makes for a bit less operator error because the operator doesn't have to set each individual tool every time. That can even be done offline before you take it to the machine."

There is a special place in Weeden's heart for one particular DECO machine at the Memphis site.

"It's a DECO 20 and it was here when I came to work here in 2003—and we call it Big T," he says, laughing as he notes that "Big T" and the DECO 13s that greeted him in 2003 are still running today.

And as much as he loves the Tornos DECO machines, Weeden is also impressed with the Swiss GT line.

"We've been buying a lot of those machines and they have performed really well," he says.

Relationships count, too

While the capabilities of Tornos machines are head turners, relationships make a difference, too, and though Elos services its own machines on the Memphis site, Weeden knows he can turn to Tornos' technical experts when he runs into a problem he can't solve alone.

"Tornos Service Manager Roland Schutz is absolutely outstanding. We don't often have to call Tornos Service because we do a lot of our own work, but he is the one to call. Roland knows the Tornos machines



backward and forward—every bolt on the DECO 20," says Weeden. "I know that if I can get hold of Roland, I can get it fixed."

Gilmore notes that from a corporate perspective, it is important for Elos Medtech to have attentive and proactive suppliers. She is always looking to increase dialogue with Elos Medtech customers as well as supply chain partners.

"It would be our hope that we can continue to work with companies like Tornos to really understand the path forward and where the technology is going," she says. "We want to make sure that we're consistently staying ahead of the curve and employing the best and latest machine technology."

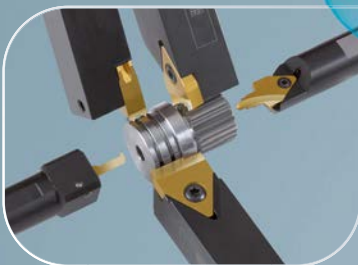
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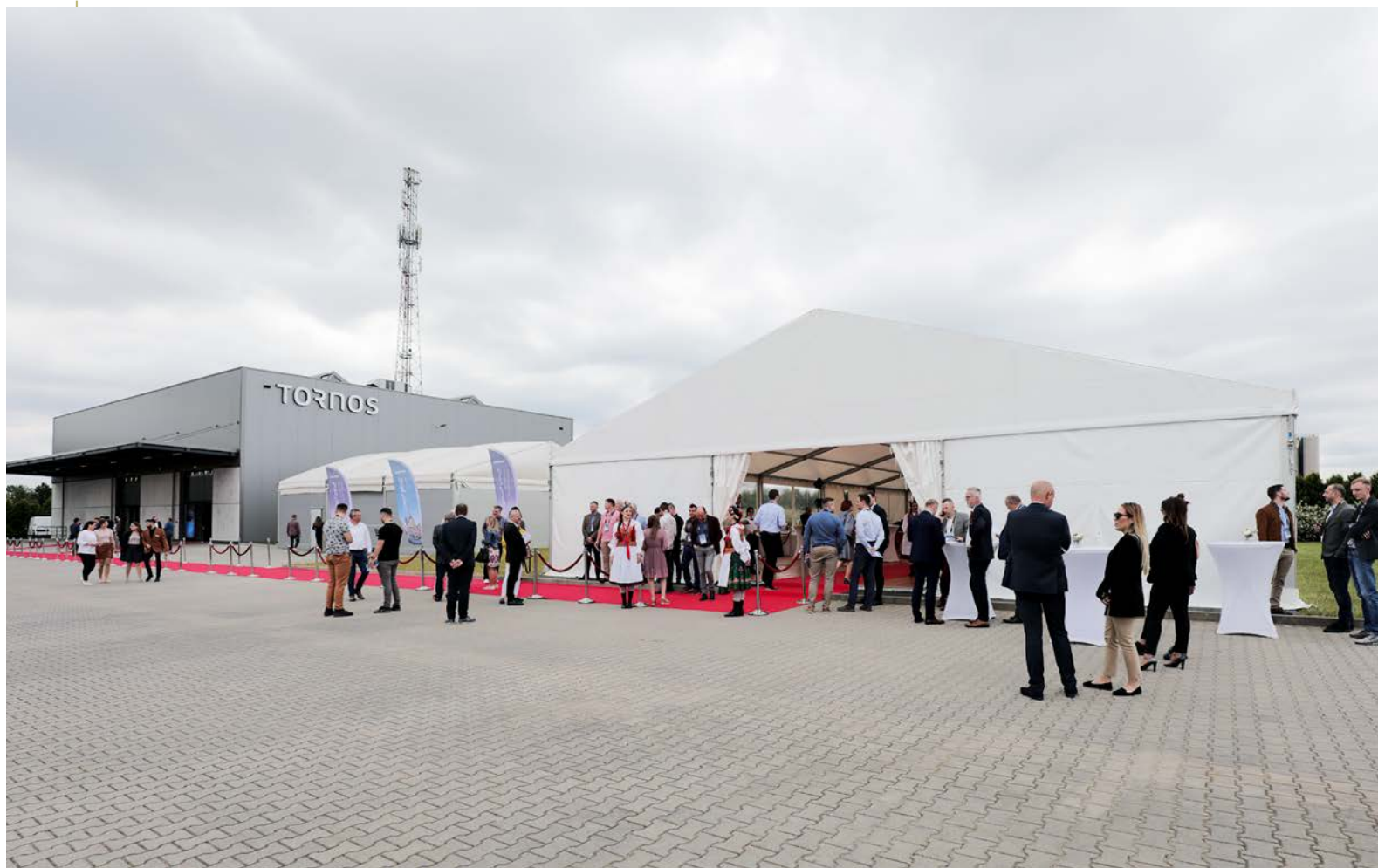
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Left to right: Andres Rego, Head of Tornos Customer Services, Grazyna Victor, Site manager Tornos Poland, Michael Hauser, CEO of Tornos, Patrice Baume, Head of Tornos Technology International (TTIN) and Patryk Hataczkiewicz, Deputy Major of Kąty Wrocławskie.

Breathing new life

into Tornos DECO 10 machines

in Kąty Wrocławskie, Poland

Tornos opened its new factory in Kąty Wrocławskie on Tuesday, May 24, 2022. The factory was designed primarily to refurbish and modernize Tornos' DECO 10, a true flagship machine, best seller, and the absolute favorite among all bar turning machines. By giving the DECO 10 new life as the DECO 10 Plus, Tornos highlights its heritage and legendary know-how while promoting the circular economy.

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More than 200 invited guests took part in festivities marking the opening of Tornos' new factory in Kąty Wrocławskie. At the grand opening, various speakers explained what Tornos is: a company with incomparable Swiss know-how, specializing in the construction of Swiss-type and multispindle automatic lathes for over 130 years.

By establishing a permanent presence in Poland, Tornos is making more than a strategic choice. The new factory, located just a few minutes from Wrocław, an important university center, makes it easy to recruit highly competent research and innovation personnel. The story of Tornos Poland began more than ten years ago, with only two employees representing the brand on Polish soil. Today, Tornos Poland has more than 40 trained employees who know the machines inside out and are able to overhaul and repair them if necessary. Most of them work in Tornos Customer Services as after-sales technicians. They work all over the world according

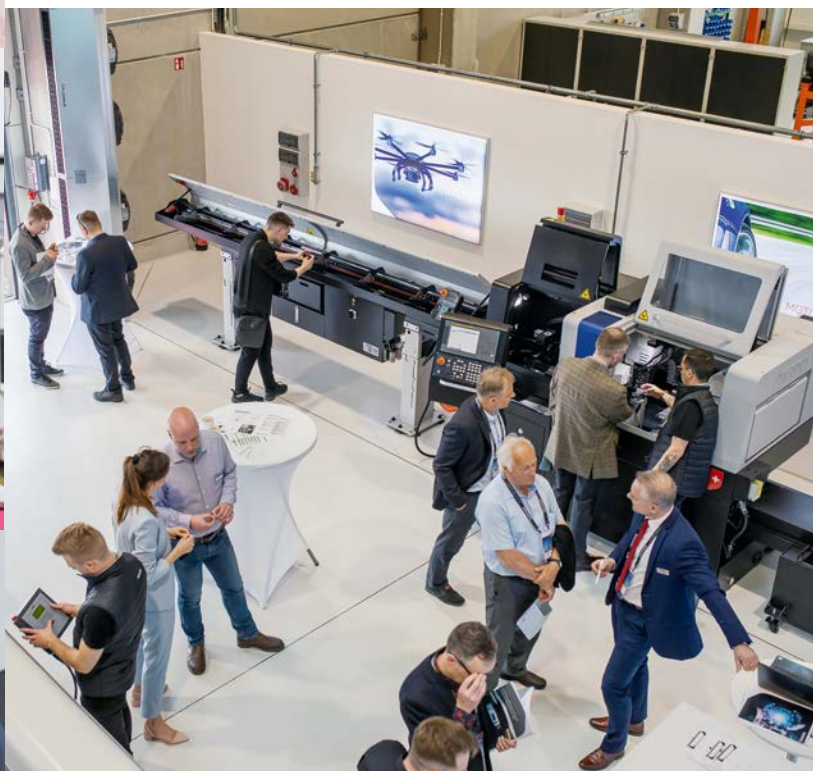
to customers' needs and ensure high-quality, efficient and effective after-sales service. Of course, service is about more than resolving technical issues and replacing machine parts. It includes the labor-intensive and very important administrative work that Tornos' new global Shared Services center is doing in Kąty Wrocławskie. Indeed, Tornos Shared Services Center provides these valuable services to the benefit of Tornos sales companies and customers in Europe, and, eventually, worldwide.

In Poland, Tornos executes its approach to industry's circular economy. Since Tornos last year began offering its customers to refurbish their DECO 10 machines by upgrading them to the DECO 10 Plus model in celebration of this iconic machine's 25th anniversary, requests have been pouring in—so much so that Tornos Poland is set to expand even further in the coming months, offering staff the opportunity to train on the unique know-how of machine tool manufacturing and refurbishment, while remaining available to customers for their after-sales needs. In doing so, Tornos is “Turning Together” for its customers in Poland—and beyond, because most of the DECO 10 Tornos is remanufacturing as fit-for-the-future DECO 10 Plus machines do not stay in Poland. They are returned to workshops across Europe and, eventually, the globe. This too, is “Turning Together.”



Tornos is not in the habit of looking back to the past, however glorious it may be. The future, all that still lies ahead, the new opportunities and challenges, fascinates Tornos much more than the past. However, the inauguration of this new factory is an important event for Tornos, so it is worth mentioning the rich history of the company headquartered in Moutier, in the Canton of Bern.

Throughout its 130-year history, Tornos has always pushed the boundaries—both technological and commercial. Tornos is a truly international company with branches in many countries, an extensive network of dealers and agents and factories in Switzerland, China, Taiwan and, with the opening of this new production site, also in Poland. But this plant is somewhat different because it has a special mission. In Kąty Wrocławskie, Tornos is putting its circular economy approach into practice in its industry. In its business, Tornos sees the need to move from



a linear model of take, make, throw away, to a circular model: make, use, return. The circular economy approach is important to differentiate Tornos from its competitors. With new propositions such as the remanufacturing of DECO 10 machines, within this new plant Tornos is creating value for its customers by offering a unique message of sustainability.

The opening of the Kąty Wrocławskie facility proves once again that Tornos' existing and potential customers can rely on its internationalization and its new operations in Poland. Switzerland and Poland, hand in hand, to confirm the Tornos slogan: Turning Together!

tornos.com



Nicomatic relies 100% on in-house manufacturing and design to enhance product quality and optimize delivery.

NICOMATIC:

Providing the customer with added value!

Nicomatic is a renowned French company working in the high-end connector and micro connector sector. Its headquarters are in Bons-en-Chablais, in the Haute-Savoie region. This international family-run group has spent more than 45 years developing and manufacturing innovative interconnection solutions for the aerospace, defence, medical and production industries.



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Zone Industrielle des Bracots,
173 Rue des Fougères
74890 Bons-en-Chablais
France
nicomatic.com

Nicomatic has been able to forge a reputation in this niche market thanks to its ability to provide highly customised products with extremely quick turn-around times, and no minimum order value. This company employs cutting-edge technology, recently placing its trust in Tornos and its SwissNano 7 to produce its micro connectors.

Agility: The cornerstone of its philosophy

Nicomatic develops tailored solutions for its customers. As a vertically integrated company, Nicomatic is extremely flexible and able to adapt to any challenge its demanding customers pose, day after day. The company is driven by a strong focus on innovation. Its portfolio of products, which are all fully designed and manufactured in-house, is made up of two major groups:

- Connectors
- Switching technology for human-machine interfaces

The company employs around 500 staff, 250 of which are based at the Bons-en-Chablais site. Nicomatic can boast 45 years of experience in the industry,

“With the SwissNano 7, the company benefits from a reduced footprint to ensure maximum productivity per square metre.”

and a turnover of around €50 million. The company exports more than 80% of its production to over 60 countries. The company has 12 subsidiaries in the United States, China, India, England, Germany, Turkey, South Korea, Japan, Singapore, Canada, Taiwan and the United Arab Emirates. Nicomatic is certified ISO:9001:2015 and EN 9100:2016 for the aerospace and defence industries, and complies with the REACH and RoHS standards. The Nicomatic approach is simple: the connectors can be customised as desired based on standard modules, a bit like Lego for connectors, with the Nicomatic offering allowing for millions of different possibilities. Nicomatic can create connectors very quickly, with 30% of its turnover coming from new items that the company has been manufacturing for less than three years. Its products are also very easy to configure online.

The SwissNano 7 as a machining partner

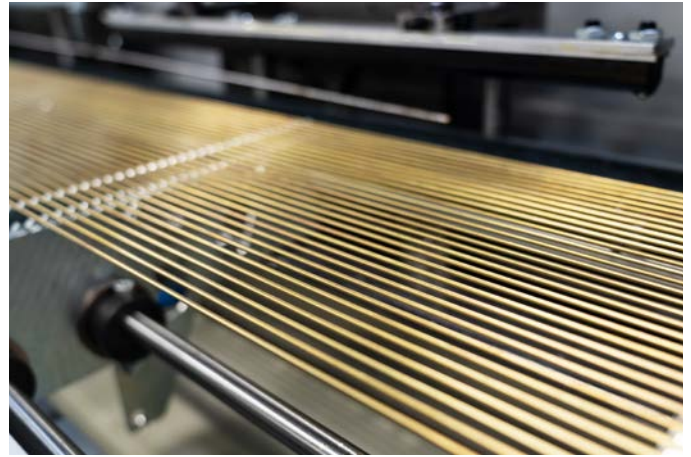
Nicomatic was looking to update its cam-type machine inventory, made up of Tornos MS 7s, and



to expand its machining capacities for micro connectors. The more user-friendly SwissNano 7 makes it easier for the company to recruit labour. It is quite difficult to find qualified personnel to operate cam-type machines. Thanks to its ergonomics, the SwissNano 7 is more pleasant to work with. The design of the SwissNano 7 is attractive to younger generations. The machine also facilitates the transition for older workers, with kinematics very similar to that of the MS 7.

Compactness: an undeniable advantage!

As with any mechanical workshop, productivity per square metre is a crucial factor for Nicomatic. With the SwissNano 7, the company benefits from a reduced footprint to ensure maximum productivity per square metre. Organised as an independent mini-plant, each Nicomatic production unit works assiduously to improve the productivity and reliability of processes, which further improves the use of the SwissNanos.



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For both Nicomatic and Tornos, it is essential to be part of a continuous improvement process and to reduce production costs. SwissNano machines are in line with this and have an immediate impact on energy consumption. Equipped with spindle motors with optimised power, the three SwissNano machines consume less energy than other machines available on the market.

TISIS and service

Bons-en-Chablais is only fifteen minutes away from the French home of Tornos. The staff are skilled, responsive, and listen to our needs. In terms of programming, the FANUC controls are something we are familiar with, and it must be highlighted that the TISIS programming software is simple to use and allows us to fully get to grips with the machines.

Quality of life for employees

The company has been investing in the well-being and quality of life of its staff for many years now. Over time, several projects have been set up to safeguard the well-being of employees. In addition to several team-building activities, the workspaces have been organised to facilitate collaboration. The employees have a relaxation area and a crèche, and the company organises a range of different sports and cultural activities for its employees to enjoy. The spaces within the company's headquarters in Bons-en-Chablais have been arranged to create pleasant zones to be in and foster the emergence of new interpersonal dynamics.

nicomatic.com



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