

deco magazine

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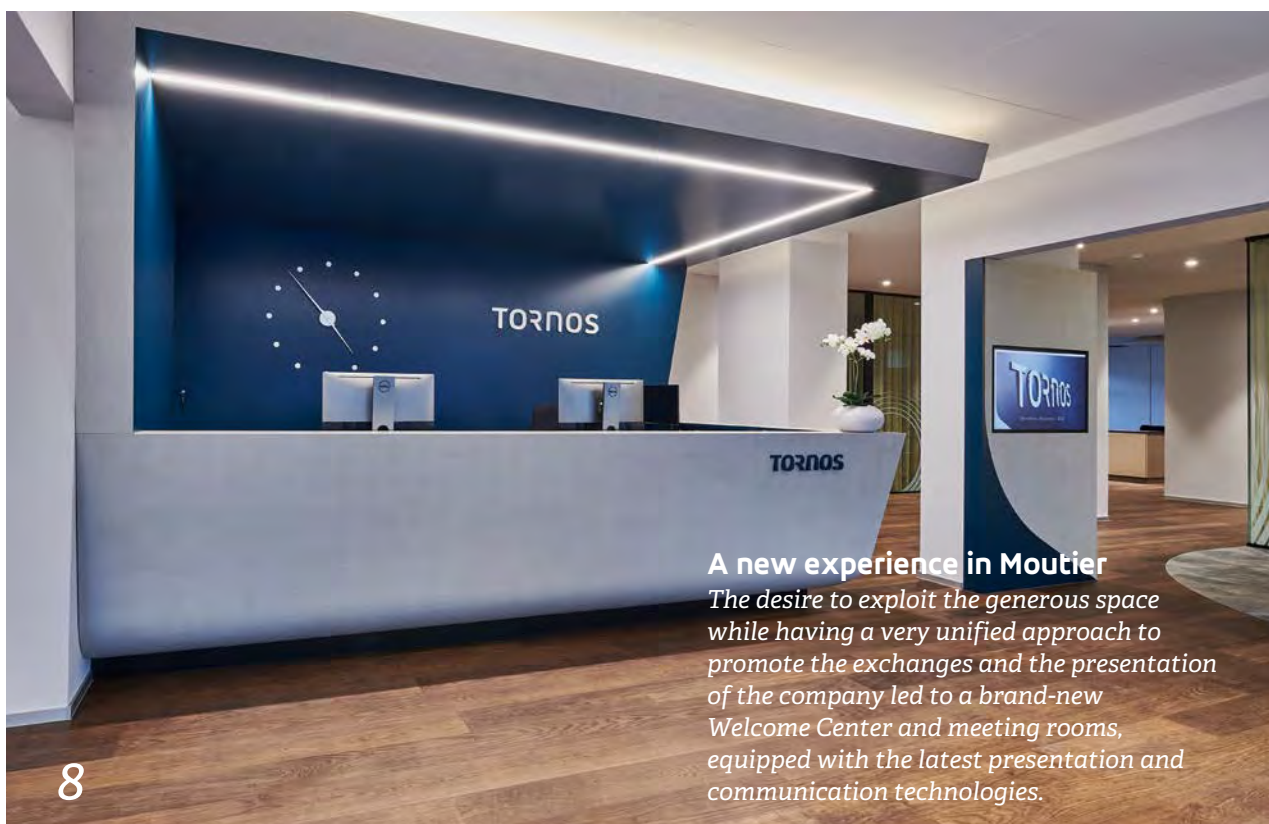
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A new experience in Moutier

The desire to exploit the generous space while having a very unified approach to promote the exchanges and the presentation of the company led to a brand-new Welcome Center and meeting rooms, equipped with the latest presentation and communication technologies.

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"All our products address this market and our solutions are tailored to our customers' needs."

Philippe Charles Head of Product Management Swiss-type /
Market Segment Manager Medtec, Tornos

Precision and quality at the service of health

Philippe Charles Head of Product Management Swiss-type /
Market Segment Manager Medtec, Tornos

The global population is increasing – and the same is true for life expectancy. These new trends open up new prospects in the field of medical and dental technology, both as regards treatment and implantation. Especially in this field, the technology is actually advancing: today, everything is simplified, everything is faster and less invasive and the patients are becoming younger and younger. For instance, this is evidenced by sports medicine or by the increase in premature joint degeneration that is primarily caused by obesity.

Given the permanent challenges the customers are faced with in the medical and dental industry, one of Tornos' four main business sectors, Tornos has to offer innovative, efficient and, above all, customized solutions. In fact, the convergence of technologies, innovation and consumerism of health care paves the way for precision medicine. The relevant information is thus used to define individual disease patterns based on which a better specific treatment for each individual can be provided.

Tornos has been dealing with this issue for more than 30 years. Few other industries are so strictly regulated – or underlie so much demands as regards quality, safety and transparency – as the global medical sector does as far as the production of medical devices is concerned. And there is hardly any industrial partner other than Tornos that has invested more to improve precision, quality and return on investment for the manufacturers of medical devices and instruments.

Responsive to the needs of our customers

We already have more than 400 customers in more than 40 countries. They are using Tornos machines day in, day out to machine surgical components. On

the one hand, this refers to the medical sector in its widest sense, which includes both orthopedic and spinal uses, and on the other hand, to the dental field with its instruments and implants.

We have developed a whole array of machining solutions dedicated to the medical and dental industries. We have adapted the relevant processes that had first been conceived for single-spindle lathes to the multi-spindle products to realize high-volume production. Today, we are ready to offer high-performance machining solutions for bar diameters ranging from 1 to 36 mm.

All our products address this market and our solutions are tailored to our customers' needs. That's why we have developed the full gamut of solutions – from entry-level to medium-scope and high-end machines – that take various parameters such as productivity, serviceability, but also the investment cost for the means of production into account.

The attitude is actually different depending on where the customers come from, be it Europe, the United States or Asia. Our Swiss DT and Swiss GT-type machines perfectly match certain expectations as regards investment and operation cost while an EvoDeco or SwissDeco machine rather stands out for its productivity, efficiency and its high serviceability. All depends on the market and on the market's needs and expectations.

Orthopedics and sports medicine in mind

In the last few years, some sectors have shown a particular trend towards further development. Let's take orthopedics and sports medicine as an example. In this sector, the global expenses amount



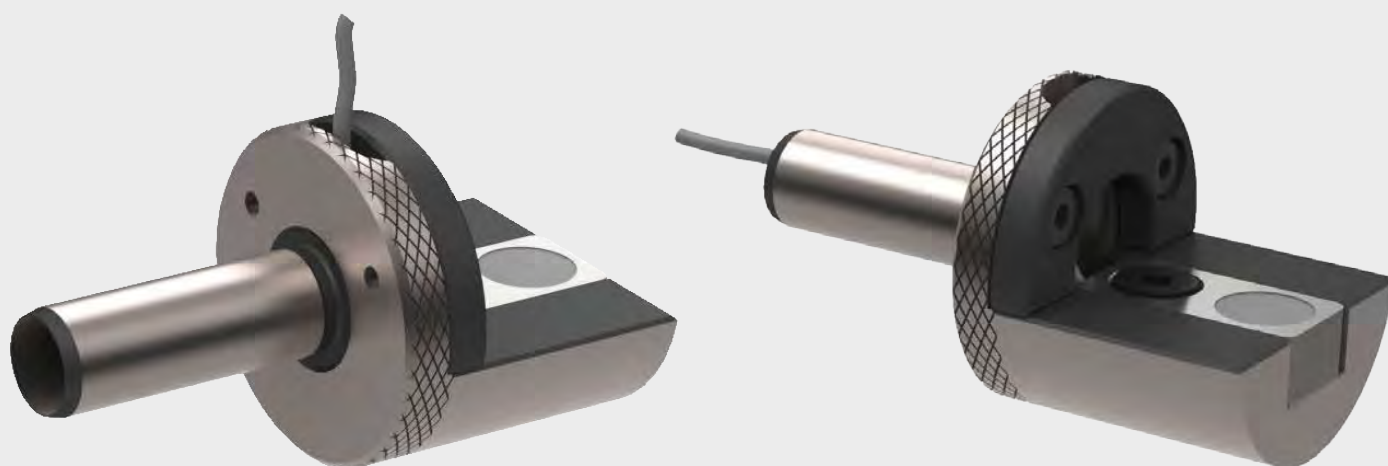
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to 43.5 billion dollars, and this figure is still increasing. This rise is attributable in particular to the improvements of therapeutic treatments but also to the increase of certain incidental cost and to the increase in life expectancy. Furthermore, it is apparent that the health systems feel the financial pressure of globalization. The fact that they have to compete in a global market affects both their revenue base and their spending pattern.

Your challenges, our experience

Even in the highly competitive market of medical and dental devices, there are various aspects that enable a manufacturer to outpace its competitors and stand out. So, in view of rapid machine set-up that is to be regarded as the key to the production of smaller and smaller batches of burr-free components, Tornos offers tailor-made tools and in-depth application expertise regarding a multitude of devices, ranging from bone screws to electronic components for the medical industry. Such solutions are offered depending on the selected machine range. Here as well, Tornos actually knows how to make the difference, no matter whether it's about specifications, design, options or peripherals. We always pay particular attention to details and finishes. We are responsive to every little need of our customers. We certainly try to meet their needs, but we also try to anticipate them by presenting solutions they have not even thought of by then.

SwissNano 7: a star in the sky of technology

An example of this is our newcomer, the SwissNano 7. This machine has been targeted so well that it fully satisfies the expectations and exactly meets the customers' requirements. Especially the 4-mm version of SwissNano 7 has more than proven its merits while maintaining the undeniable advantages of its predecessor regarding precision, thermal stability, floor space and power consumption.

Thanks to the large number of tools and the vast machining capabilities, the machine is simply brilliant and is about to become a bestseller in the medical and dental fields as well as in electronics and micromechanics industries – and, most importantly, in watchmaking.

Optimized automation solutions

Our automation solutions are equally interesting. They enhance productivity, quality and production autonomy while eliminating operator errors. We offer cleaning, measurement, in-process compensation and storage solutions that are able to perform these tasks for four lots of parts that meet the quality specifications and thus prevent the risk of injuries.

The patient's health has absolute priority

Reaching a kind of perfection, that's the vision we pursue with the machining of top-quality components with high added value. With this in mind, we have been closely collaborating with manufacturers of medical devices from all over the world to assist them in providing impeccable products that improve the quality of life for patients. Tornos provides you with professional solutions specifically tailored to the needs of this highly demanding sector.





What people feel, *think and say about Tornos*

At Tornos, we want to engage with our existing and prospective customers to inspire confidence. While machine features and specifications are important in industries like ours; reputation, perceived value and awareness are also critical factors in the supply chain.

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We want these manufacturers to experience Tornos as both a brand and a synonym for quality, productivity, precision and efficiency. As Tornos pursues these goals, the Group is guided by its strategy, vision and values. Rolph Lucassen, Tornos' Head of Marketing Communications and Brand Management, explains the rationale behind the group's updated brand design.

decomagazine: Why did Tornos decide to change its brand design?

Rolph Lucassen: *Brand follows strategy. The selected brand design, including the new Tornos logo, is visible evidence that we are actively building our future by implementing our strategy. By clearly defining ourselves as a truly global, agile and innovative company, we differentiate ourselves from our competitors, strengthen our brand and create confidence in the market place.*



dm: What exactly do you mean by this strategy?

RL: We have defined the six pillars on which we intend to build our future. At the top of the list is the internationalization of our business. In today's global marketplace, we could not limit ourselves to Switzerland. Therefore, we became focused on internationalization of our business, strengthening our flexibility and growing through innovation. We stand out thanks to Tornos Service. These choices enable us to develop our operational excellence and offer exclusive customer-based solutions for targeted market segments.

dm: How does Tornos plan to follow this path?

RL: The change is at all levels and affects all of our company's activities. The machines we build today are really different from their predecessors. We kept our principles of excellence, quality and performance, but today we focus our research more on our products' ergonomics, footprint and energy optimization. We pay particular attention to details and, above all, we put the human—the customer and the customer's machine operator—at the heart of our research, our approach and our thoughts.

A new experience in Moutier

Tornos' administrative building in Moutier was built in 1958 and, understandably, was showing some signs of aging. As with Tornos' modernized logo, which has displayed for some years on all of our buildings, Tornos wanted to bring the functional and the emotional sides of the brand—the “look and feel”—under the same roof. For this renovation project, Tornos collaborated with Mint Architecture in Zurich to develop a unique concept. It was about translating the values of the company while making the best use of the existing structure. The desire to exploit the generous space while having a very unified approach

to promote the exchanges and the presentation of the company led to a brand-new Welcome Center and meeting rooms, equipped with the latest presentation and communication technologies. Modularity and flexibility are the order of the day for Tornos, so the spaces range from formal rooms to more intimate areas. The renovated ground floor brings together new and modern window treatments, lighting and the installation of acoustic panels, while respecting the relatively square built environment. The result is stunning. A visit is required.

“We put the customer and the customer’s machine operator at the heart of our research, our approach and our thoughts.”

Rolph Lucassen Head of Marketing Communications & Brand Management



dm: A machine tool manufacturer who is interested in people first?

RL: Putting humans at the center of our machines, giving shape to aspirations, and anticipating needs and achievements are, in a way, at the heart of our vision. This is also part of our corporate culture. Just as animals have to adapt to their environment in order to survive, a business must transform itself to fit the outside world. As a result, just as animals migrate to new environments, the company needs such essential qualities as open-mindedness and a desire by coworkers and teams to learn from and support each other in order to succeed and open new markets by specializing. Forward-looking attitudes and shared values are, therefore, key factors for the well-being of all us: our customers, our Group, our colleagues, and ourselves.

dm: How does this translate into reality?

RL: We have defined six values that we think are essential. We build our entire corporate culture around agility, open-mindedness, daring, reliability, sharing, and appreciate and enhance. By daring to try new things and accepting the risks, we are all moving together to conquer our goals.

Concretely, in the field, we also decided to offer our existing and prospective customers a new experience, the Tornos experience. When they visit us on our booths at trade shows, for example, they discover our universe, a universe designed with a unique mix of industrial design and human warmth, concrete and wood. The machine is staged—placed on a pedestal—as the center of attention and we are its champions. The way we receive people shows them how much their presence makes the difference. Similarly, at our headquarters in Moutier, we have just completed the renovation of the ground floor of the administrative building with a new Welcome Center, meeting rooms, and a clear, transparent environment where everyone feels at ease and can easily communicate. We proudly display the company’s colors. With this palette, we invite our customers to experience something unique. It’s the same in our new Customer Center in Shanghai. And we have plans to build a similar facility in Germany aligned with this new concept.

It's all about emotion. If you feel welcome in a place, you want to return to that place. You know that you will immediately find experts who are not only competent to talk with you about our products but also eager to listen to you and learn about your needs, your problems, your projects.

Knowing your audience and playing the right notes at the right time are what Tornos intends to do on a daily basis. In this way we are like an orchestra: Each Tornos employee brings his and her competence to the venue and, together, we each play our part to create a melody in perfect harmony.

I, for one, have the privilege of helping to make this special world go round. "We keep you turning" is not just a promise; it is also a guarantee of quality. It conveys our commitment and our willingness to always surpass ourselves as we lay the foundation for our customers' success in manufacturing.

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From entry-level to high-performance machines

For several months now, Tornos has been launching numerous new products such as the Swiss DT 13 and Swiss DT 26 machines. Today, these machines constitute a full line-up and inspire many users with their performance.

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The entry-level segment of Tornos comprises two product lines, namely the CT 20 machine, the second version of the machine that was recently introduced in this magazine, and the Swiss DT machine. These machines are subject to constant evolution to remain competitive. Against this backdrop, the Swiss DT 13 and Swiss DT 26 models have undergone significant modifications that are aimed at improving their rigidity and their axis feed rates over time. Moreover, the TISIS programming software has been enhanced to enable maximum performance and productivity of these products.

CT 20: for a rapid return on investment

The CT 20 is a small and sturdy machine that is easy to use. It has five linear axes and two C-axes. In its basic configuration, the CT 20 machine comes equipped with a drive motor for driven tools both for main and back machining operations. Next to the counter-spindle, the machine can accommodate two spindles for driven tools and can thus be equipped with 11 driven tools with a total of 27 tools. Such flexibility is simply unique for this machine class. All the more, as the machine it can be optionally fitted with a thread-whirling cutter, a polygon cutter, a triple drilling/milling unit as well as a slotting device for back machining.

"Our CT 20 is the most affordable machine of the entire Tornos product line-up and has proved to be highly successful in the market," Philippe Charles, Product Manager at Tornos, explains. Thanks to its appealing price, it can easily replace aged machines in a workshop. It is a machine that allows rapid return on investment. Thanks to its ease of operation,

changeover from a competitive machine to a CT 20 machine is a walk in the park for everyone. Its modular tooling system and its stable and rigid cast-iron frame make the machine an excellent partner for all situations. CT 20's power is more limited compared to the Swiss DT 13 and Swiss DT 26 machines, the latter



Standardized programming thanks to TISIS

Any Tornos machine can be programmed with the TISIS programming software and this equally applies to the Swiss DT and CT 20 machines. Moreover, they can be equipped with the Connectivity Pack that enables remote monitoring of the status of the machines. TISIS has a database that contains the data of all tool carriers, from simple tool holder plates to polygon cutters, milling units and thread whirling cutters. Each of these devices has its own features that are taken into account by TISIS. So, when a device is selected, only the positions that can accommodate the device will be enabled. Furthermore, TISIS manages any incompatibilities between various devices. It provides intuitive user guidance through

the operation of the machine. Each tool carrier has its own illustration and therefore can be identified with ease. It should also be noted that the standard geometries are automatically displayed as soon as a workpiece is selected.

The ISO editor automatically synchronizes the code per channel and uses syntax highlighting to facilitate the distinction of the value codes.

You are invited to download your free TISIS evaluation software version under **store.tornos.com**.





also being an entry-level machine that has been designed taking a minimum number of requirements into account. The machines of the Swiss DT range use the same optional equipment as the machines of the Swiss GT range, which ensures optimized investment in tool holder systems.

Swiss DT 13: productivity

Swiss DT 13 has been conceived for bar capacities of 10 mm without barstock preparation and 13 mm with barstock preparation. In addition, it is provided with 5 linear axes and 2 C-axes and its kinematic system is aimed at high productivity. Thanks to its maximum feed rates which can reach 35 mm/min and its L-type kinematics, the Swiss DT 13 is extremely fast and its chip-to-chip times are ultra-short. The spindles can be operated with a maximum speed of 15,000 rpm – a speed that is normally reserved for higher-class machines. The machine is equipped with a motorized synchronous guide bush that can reach the maximum spindle speed. This guide bush improves machining accuracy and the surface finish of the workpieces. Moreover, it can spare valuable seconds when machining long parts. The machine can also be converted for guide bush-less operation and adapted

to the specific workpiece requirements. It therefore boasts a flexibility that is unique in this machine range.

Vast machining possibilities

With its extensive tooling, it is very easy for the Swiss DT 13 to produce complex parts. The machine can be equipped with 21 tools including 7 driven tools. Three driven tools are located in the main gang tool post. They can reach maximum speeds of 10,000 rpm.

The Swiss DT 13 can be optionally provided with a modular position, so a gear hobbing unit can also be mounted. For a long time now, this unit can be used for the SwissNano and EvoDeco machines as well. This has proved its merits and has played its part in the recent success of the Tornos brand in the watch-making industry

Swiss DT 26: power and modular concept

The proven kinematics of the Swiss DT 26 features five linear axes. Given the bar capacity and the performance of the machine, the Tornos engineers have prioritized good chip removal by arranging the gang

		CT 20	Swiss DT 13	Swiss DT 26
Maximum diameter	mm	20	13	25.4
Number of linear axes		5	5	5
Number of C-axes		2	2	2
Number of independent tool systems		2	2	2
Total number of tool positions		27	21	22
Positions for driven tools		11	7	8

tool post above the guide bush or the spindle. With its spindles that can reach a power of more than 10.5 kW during front and back machining and a bar capacity of 25.4 mm, the Swiss DT 26 actually enables large cutting depths. Against this backdrop, excellent chip removal is required to be able to tap into the full potential of the machine. Just like the Swiss DT 13 model, the machine is equipped with a motorized guide bush. In less than 15 minutes, it can be converted to enable the operation with a collet.

Modular configuration for main and back machining operations

The machine comes equipped with four radial drills for front machining operations. This equipment grants the user high flexibility. To improve this flexibility, the machine can be provided with a thread-whirling cutter or a polygon cutter. So, it will be very easy for the Swiss DT 26 to produce medical screws or to perform face milling tasks with these two attachments. The thread-whirling cutter can be inclined by $\pm 15^\circ$ and it can rotate with a maximum speed of 5,000 rpm and machine diameters of up to

10 mm. On the other hand, the polygon cutter can also reach a maximum speed of 5,000 rpm while the diameter of the polygon cutting tool is 80 mm. The back machining post can be equipped with both stationary tools and driven tools. This post can also accommodate advanced tooling such as a high-frequency spindles specifically designed to machine Torx® patterns or even a slotting device.

The CT 20, Swiss DT 13 and Swiss DT 26 machine models are efficient solutions that permit a rapid return on investment. The Tornos machine line-up enables all users to find the appropriate solution for their specific requirements. Like any Tornos machine, the Swiss DT and CT 20 machines can be equipped with a lot of options such as a special device for the removal of long workpieces, high-pressure units and many others.

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First product of i-moutier: the high-end production cell developed in partnership with regional companies. It comprises a Tornos Swiss-type lathe, a robot intended to clean, sort and measure the workpieces as well as a great deal of embedded intelligence: a real "Industry 4.0" solution.

I-MOUTIER:

The link between tradition and innovation

By opening a co-working space and a business incubator, Tornos aims to continue the tradition of more than 100 years of innovation in micro-technology in the Swiss Jura Mountains.

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With the Tornos Precision Park in Moutier as the point of origin of the sliding-head automatic lathe, it now has a center of excellence dedicated to precision. In particular, the Tornos Precision Park accommodates an incubator intended to help develop micro-technology projects. "This new platform enables Tornos to stimulate our tradition of innovation," explains Anne Hirtzlin, Project Manager and General Secretary of the i-moutier incubator. To learn more about it and especially about its benefits for the customers, we talked to Michael Hauser, Tornos' CEO, and the Project Manager.

Located on the Tornos premises, the former Junker factory is an integral part of Tornos history. It played an important role in the development of the sliding-head automatic lathe that is known throughout the world as the 'Swiss-type lathe'. Here, in 1889, an innovative approach was pursued to automate the production of small high-precision components. Today, the completely renovated building is home to the Tornos canteen on the first floor and the i-moutier incubator on the upper floors. Moreover,



With its pleasant setting and appealing coworking spaces, the i-moutier incubator offers ideal conditions for creativity to emerge.

To go even further

What is the target audience of the i-moutier incubator?

The incubator addresses companies that are engaged in the micro-technology sector and are interested in working on joint projects or topics. It will also attract entrepreneurs and start-up companies that are working on projects related to new high-precision technologies, digitization or Industry 4.0 that want to benefit from the close proximity to the local industries for the development of their projects.

What services are provided?

The incubator is intended to be a place for exchange of information and creativity. Coworking spaces and areas to rent are made available to enable engineers and entrepreneurs to work in a different climate. Any companies that wishes to do so can benefit from various services and advice provided e.g. by means of coaching or specific assistance organized with regional partners. As a matter of course, the incubator comprises collaborative projects.

How do collaborative projects work?

Any individuals or companies with ideas or problems relating to precision or micro-technology can contact the incubator and submit their project. A technical committee comprising regional manufacturers and authorities screens will validate them in cooperation with the members of the i-moutier association (made up of Tornos, other companies and institutions). The latter defines the accompanying measures of the projects (accommodation, care, financing).

For further information, please visit www.i-moutier.ch

Anyone interested is invited to apply to info@i-moutier.ch by attaching a first description of the concept and a 3-year business plan.



Johann Schneider-Ammann, the then Swiss Federal Councilor, dropping in on i-moutier.

in the adjacent building, a FabLab-type space for prototyping including appropriate equipment is currently being installed.

A platform at the service of innovation

"The Tornos Precision Park brings together start-ups, partner companies, higher education facilities and institutions with the aim to develop new, pioneering solutions," explains Michael Hauser. He continues: "By founding the i-moutier incubator, we pursue the same goal." It is a cooperation platform dealing with specific topics linked to the expertise found in the Swiss Jura Mountains. It enables the regional industries to collaborate on innovation projects and also puts the entrepreneurs in a position to develop micro-technology related projects. Both for customers and partners, this guarantees fast and dedicated development and generates a lot of complementary skills.

Various services for companies

The premises have been upgraded tastefully, but that's only the tip of the iceberg. They offer various workspaces, a co-working space, a reception desk and a relaxation area as well as pleasant common areas. To this day, these facilities have been used by

a number of SMEs that rent space for their purposes. Furthermore, several collaborative development projects have been realised here. The facilities also serve as a venue for various events. The latter included a development contest involving all training centers and technical schools of the Swiss Jura Mountains with the aim to develop part discharge solutions as well as the #bepog project intended to enhance industry and related technical professions. Moreover, a meeting between the Swiss Federal Councilor Johann Schneider-Ammann and a group of SIAMS exhibitors was held here.

Three collaborative projects launched

The first project called SMAC was realized with the collaboration of several regional manufacturers. The result is an integrated production cell. The CEO comments: "As soon as a workpiece has been machined on a Tornos lathe, it is gripped by a manipulator that transfers it into the cleaning station. After being cleaned, the workpiece is transferred to a measuring cell. Appropriate algorithms analyze the measured data and immediately correct any drift of the machine during the warm-up period. This cell can thus ensure optimized production with 100% component quality from the very start of production."

Inter-school contest and collaboration

Within the scope of its i-moutier incubator, Tornos has set up a contest intended to bring the students of the technical schools of the Swiss Jura Mountains to work together.

The first time this event – an event that is expected to become a permanent institution – was held, thirty students from about ten schools participated. The purpose of this contest was to enable the students to work on a specific project concerning a “parts collection system”.

After just two days, five parts collection projects saw the light of the day!

After having discovered the company and having made themselves familiar with the set of problems and after having formed groups competing with each other, the young trainees got the chance to have themselves coached in creativity to become able to find innovative solutions.

Tornos management was thrilled by the project

In the late afternoon, after the different projects had been presented and defended, Michael Hauser, CEO of Tornos told us: “We are thrilled by the work the students have done and we want to highlight their commitment as well as the quality of their work and their presentations.” He added: “We would like to express our sincere thanks for that.”

Upon agreement with the technical schools involved in the first event, this contest will be repeated every two years.

The winning group of the Tornos award for the best idea from technical schools.



Walter Fust, entrepreneur and majority shareholder of Tornos (left) and Michael Hauser, CEO of Tornos and president of the association, talking to each other in the rooms of i-moutier on the occasion of its official opening.

The second project involves various regional companies and refers to the IT sector. decomagazine will certainly return to this topic once detailed information becomes available.

A third project that will be a milestone

Even if it's too early to go into detail, we can already say that the third project with partners will certainly underpin the expertise in micro-technology innovation. This will underpin the aims of Tornos, the Swiss Jura Mountains region and Switzerland. “We are specialized in manufacturing small high-precision parts and in this field, the tendency towards miniaturization and production based on the build-to-order principle in line with “Industry 4.0”. This forces us to come up with completely new solutions,” the CEO explains.

Prototyping workshop and much more

The new prototyping workshop is under construction and will enable the project partners and the companies that are renting facilities (some start-ups have already shown interest) to rapidly test new concepts and ideas. Anne Hirtzlin adds: “With the incubator, we will be at the heart of innovation and be able to work much faster and more efficient on the development of innovative solutions together with the i-moutier partners.” Michael Hauser concludes: “We share ideas and work together on solutions for tomorrow. With the incubator, the pooled expertise of an entire region is made available to our customers and partners.”

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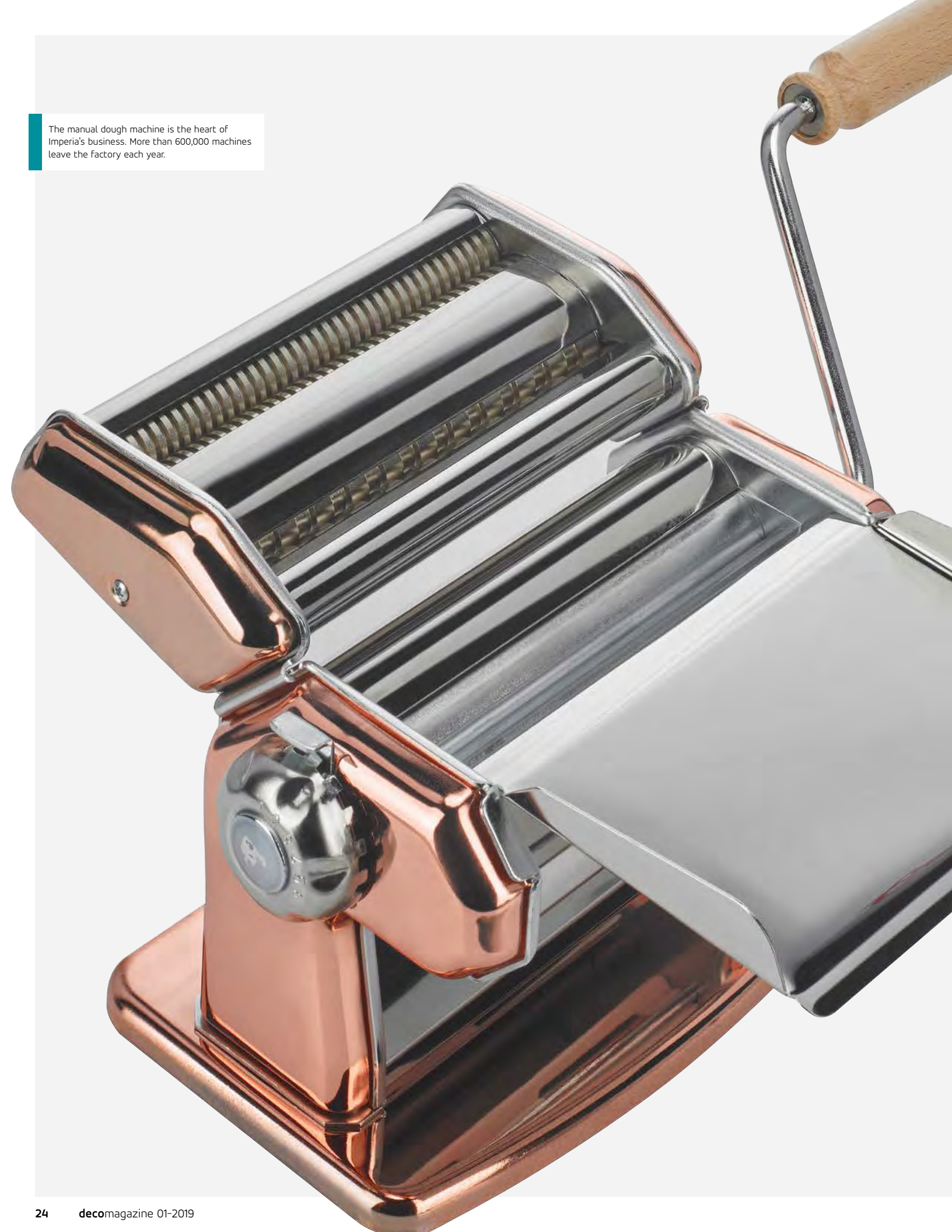
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The manual dough machine is the heart of Imperia's business. More than 600,000 machines leave the factory each year.



IMPERIA & MONFERRINA:

A 'made in Italy' icon

relies on Tornos

for its production

Imperia & Monferrina, a company based in Turin and Castell'Alfero in the province of Asti, produces pasta making machines. An iconic brand and leader in Italy, it is known and recognized for the flawless quality of its products and its customer orientation. When the company recently decided to modernize its production equipment, it turned to Tornos. Imperia & Monferrina CEO, Enrico Ancona tells the story during an impressive factory visit.



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A little history

Pasta and its production are closely linked to Italy, so it is not surprising to find in this country with a well-established gastronomic culture, a manufacturer of pasta machines like Imperia & Monferrina. Imperia is not just any manufacturer. The market leading company was founded in 1932 and most of the pasta making machines it has produced since then are still in operation. These machines are of such a quality that 'they never die', according to Ancona.

When Imperia was bought by the three Ancona brothers in 1981, the company had a turnover of about €2 million Euros. Today, it has a turnover of about €25 million Euros and it employs 75 people. This exponential development is due to an extraordinary team and diligent work. The company also owes its success to the popularity of pasta, which has conquered the world. Pasta is easy and inexpensive to make, and it is

“Very quickly the Tornos Swiss DT 26 proved ideal”

Enrico Ancona CEO Imperia & Monferrina



trendy not only in Italy but worldwide. Thus, Imperia & Monferrina products are import on all continents and in more than 100 countries throughout the world and with great success. The Imperia & Monferrina team modestly attributes the company's success to the worldwide success of pasta and megatrends such as the increase in world population and large population movements.

Two distinct entities

The company is divided into two distinct brand entities: Monferrina produces for the professional market, such as restaurants and pasta shops that sell their own homemade pasta products. The company offers various machines depending on the quantity of pasta to be produced. The variety of production channels and devices is very impressive here, requiring the company to adopt rigorous stock management. The pasta shapes to be made are extremely varied and complex.

“We comply with all the extravagances of the market, I think that our machines are capable of making all types of pasta, which is one of our strengths,” Ancona explained. The company distributes its products and ensures their service throughout the world, and is committed to satisfying customer's vision of the shapes of pasta to be made.

“We always maintain a healthy inventory of our products in order to quickly satisfy customer demand. To this end we have built a modern warehouse near Turin in order to be able to store our products in optimal conditions and prepare for any eventuality. When a restaurant or one of our wholesalers needs products right away, there is no time to lose. Responsiveness is the key to our business.

Monferrina can repair its pasta machines very quickly, whether in New Zealand, South America, New York or Italy, and Tornos does the same for its own products.

“We were delighted to see that the service provided by the Italian subsidiaries of Tornos is simply exemplary,” Ancona added. “This is a very important point for us because what our customers expect from us is also required from our suppliers and Tornos gives us full satisfaction.”

The other distinct brand entity of the company is Imperia, which manufactures manual and traditional pasta machines in the purest Italian tradition. It offers machines for almost all types of pasta including filled pasta of any shape. The company also offers a wide range of solutions on this basis for the production of cookies or pancakes, for example. These machines are intended for household use. Imperia promotes them under its own brand and also produces them under private labels.

Imperia & Monferrina also supplies a major player in the pasta industry for stand mixers.

“This company, whose name we will keep secret, was looking for a partner who knew the market and its constraints to develop this functionality on these robots,” Ancona said. “This manufacturer was impressed by our know-how and service, and we were able to win the contract by offering them a superior quality product at an equivalent price.”

That contract also led Imperia & Monferrina to contact Tornos and become interested in the Tornos Swiss DT 26 machines,” he said. “Not only did we need to increase our production capacity and find more powerful machines; our first challenge was to replace the AVZ steel that we traditionally used for the rollers of our machines with stainless steel. As our bar turning machines were not powerful enough, we wasted too much time in production for stainless steel rollers, so we needed a simple and powerful machine to be



The modern and rational production unit at Imperia & Monferrina reflects the exemplary quality of the final product.

able to meet the demand. It is natural that we turned to Tornos and Carlo Rolle for advice."

The Swiss DT 26 single-spindle turning center is equipped with a powerful 10.5 kW motor that drives the front and rear spindles, allowing an impressive level of torque to be achieved over the entire speed range, from 0 to 10,000 rpm. The very powerful spindles make the Swiss DT 26 the only 'entry-level' machine capable of achieving such efficiency.

"This was a crucial point for us. Our activity is profitable thanks to the volume, so we have no choice: We have to grow, but in an intelligent way. Also, it was comfortable to be able to benefit from the know-how of a competent partner. The machines have been customized to our needs with long piece extraction," said Ancona.

Very quickly the Tornos Swiss DT 26 proved ideal, he explained.

"The machine is three times more powerful than our current machines. The machine base is also ultra-rigid which allows us to obtain impressive cycle times on our parts. We are confident in our choice and confident we made the right decision to invest in four machines. This choice was the right one," Ancona added. "Quick to set up and very efficient, our Swiss DT 26 turning centers allow us to efficiently produce parts for our customers. We can now produce a better-quality product thanks to our Tornos machines and their outstanding performance!"

imperiamonferrina.com





Thanks to its vast expertise and know-how, Tornos is able to offer innovative customized high-performance solutions for the medical and dental industries.

MEDICAL AND DENTAL INDUSTRIES:

A business segment that undergoes

constant changes

In a society with a perpetual imbalance between growth, negative growth, urbanization and inexorable ageing, medical technology companies have an important role to play. Tornos is no exception to this rule. As a pioneer in this field, the Moutier-based Company has never ceased to improve, whether in terms of precision or quality. These are two essential factors if you want to go further and further in the field of micro-precision.

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While the global population is growing and ageing, the gradual urbanization of our civilization creates new health risks. The United Nations expects that the ageing population will involve a significant social change for which Tornos has been prepared for many years, especially in the medical and dental sectors. The machine tool manufacturer actually has such expertise in the field that it knows it can anticipate the needs of this booming market by providing innovative customized high-performance solutions.

Growth and aging of the population

The global population is forecast to grow by 16% by 2030. In the same period, the global population will be ageing. The number of people aged 60 and older

Thanks to fully numerical axis control, manufacturers can handle extremely complex medical and dental components with ease and in a single set-up.

is increasing faster than that of younger age groups and it is expected to double by 2050 and even triple or more by 2100. This demographic trend of ageing opens up new prospects with regards medical and dental technology since the people aged 65 and older have more demand for appropriate care. Two thirds of the patients needing an artificial hip, for instance, are older than 65 years.

Medical devices are used to prevent, diagnose or treat diseases and complaints or to detect, evaluate, restore, correct or modify the structure or functions of human bodies in order to restore health.



Material: Stainless steel (316)
Diameter: 6 mm
Length: 179 mm

Material: Stainless steel (316)
Diameter: 15,8 mm
Length: 360 mm

Material: Titanium
Diameter: 8 mm
Length: 36 mm

Material: Titanium
Diameter: 5 mm
Length: 39,5 mm

Precision medicine – targeted and customized

Today, the convergence of technologies, innovation and consumerism of health care paves the way for precision medicine, also called personalized medicine. The relevant information is used to define individual disease patterns based on which specific treatment is best for each individual.

Few other industries are so strictly regulated, or place such exacting demands with regards to quality, safety and transparency. For more than 30 years, Tornos has been closely collaborating with manufacturers of medical devices from all over the world to assist them in providing impeccable products that improve the quality of life for patients.

In this way, Tornos enables its partners to produce anything connected with spinal instrumentation. This ranges from poly-axial and mono-axial screws including screw heads to lock nuts, not forgetting intervertebral cages that are used to treat certain dorsal and cervical diseases and also for degenerative disk diseases.

As regards maxillofacial surgery, Tornos follows the ongoing trend towards miniaturization that requires ultra-precise screws with extremely sharp threads and heads being able to withstand high forces as well as a flawless connection to the osteosynthesis plate.

Orthopedics and sports medicine in mind

Specialized in the treatment of bones, joints and soft tissue, both orthopedic and trauma surgery often use bone screws and other fixation devices such as plates. Tornos has extensive expertise in the production of cannulated screws, cancellous and cortical bone screws as well as locking screws (made of stainless steel or titanium).

Moreover, Tornos has specialized in cannulation, a process used for machining a central hollow shank. Hip screws are also the perfect proof of Tornos' knowledge in the field of orthopedics and it illustrates the high machining performance the company offers, especially in terms of threading.



Material: Stainless steel (316 LVM)
Diameter: 13 mm
Length: 91 mm

Material: Titanium
Diameter: 8 mm
Length: 17,4 mm

Perfect results for the most complex parts

Among the health-related business sectors, the dental field is experiencing an extraordinary boom. This is due to the fact that dental medicine means much more than getting back a beautiful smile. In fact, it can ensure various essential functions required to guarantee a high quality of life such as biting and chewing food. Dental implants, including bone screws, abutments and locking screws must be bio-compatible and resistant to various compression, traction and shearing forces.

Screws used to anchor dental implants pose the same kind of challenges as screws that are used for other medical purposes. The current kinematic system of the automatic lathes from Tornos offer a B-axis system in order to machine milled contours with the requested complexity.

Both in the medical and in the dental fields, a whole array of specifically designed tools is required to assist the physician when it comes to cutting, clamping and blocking, retracting and exposing as well as

holding the relevant parts of the body during surgery. Such tools must be easy to sanitize, economical and in certain cases, compatible with robotic handling.

They should therefore be manufactured from suitable materials. For the production of medical and dental devices, bio-compatibility is essential. The latter defines the ability of a material to perform with an appropriate host response in a specific situation.

Traditional material or innovative material?

Tornos attaches great importance to the physical properties of the material. Likewise it is the ability to satisfy the requirements of its use and to the appropriate treatment processes such as chemical and



biological properties as well as the compliance with valid regulations. The material cost is another factor that must be taken into consideration.

Classical bio-materials such as platinum, magnesium and stainless steel as well as more recent bio-materials, in particular cobalt-chrome and polyether ether ketone (PEEK), are the materials the Tornos solutions aim at. The machining of PEEK is certainly subject to various constraints. Under no circumstances should PEEK workpieces that are intended for implantation purposes be exposed to cutting oil during the machining process. This means that dry machining is required. Moreover, all lubricants used must be compatible with PEEK. In this particular case, cooling is ensured by a targeted jet of cold air.

Inclined milling and B-axis

Just like certain components such as vertebral implants, orthopedic bone nails and screws as well as dental implants require specific solutions, in

general as regards milling. Thanks to fully numerical axis control, manufacturers can handle extremely complex medical and dental components with ease and in a single set-up.

Furthermore, the high-end Tornos machines are equipped with a tool holder with fixed nozzles that enable the cutting oil to be precisely supplied directly to the cutting edge of the indexable insert. In this way, excellent chip breaking, process security and high productivity are ensured.

Based on its expertise in the field of medical technology, Tornos is ready to tackle the challenges the customers are confronted with. When you opt for a Tornos machine, you will be definitely the first to conquer the market because Tornos enables you to master the demanding production part approval process. You will be able to immediately start rapid machine set-ups. This is essential for the burr-free production of batches that are becoming smaller and smaller due to the increasing trend towards customized medical and dental devices.

[tornos.com](https://www.tornos.com)



Material: Titanium
Diameter: 5 mm
Length: 15,2 mm



Material: Titanium
Diameter: 3,9 mm
Length: 13,8 mm



Material: Titanium
Diameter: 4,3 mm
Length: 13,2 mm



Material: Titanium
Diameter: 4 mm
Length: 12,5 mm



From left to right: Jordi Terrats (CEO and Production Manager), Roger Terrats (COO) and Ramón Terrats (Technical Office Manager) in their ultra-advanced workshop.

TERRATS MEDICAL:

A motivated team that is aiming at
high performance
*and is entirely dedicated to the
 production of high-quality
 prosthetic parts and dental implants*

In Catalonia, just a few miles from Barcelona, you will find an exceptional enterprise, domiciled in a recently renovated building. Terrats Medical has grown over the years and little-by-little, it has developed to a workshop that can produce the most surprising workpieces on an automatic lathe. The success of the family-run business is based on hard work, ingenuity and innovation. Today, the company, that was founded by the family grandfather, is managed by three brothers: Roger Terrats (Sales Manager and COO), Jordi Terrats (CEO and Production Manager) and Ramon Terrats (Technical Office Manager).



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dess-abutments.com

Beginning with Tornos

Before it advanced to become a key player in the dental sector, the company had focused on job order production and the production of connector parts. Since these sectors are extremely cyclical, the company decided to turn to a project that dealt with a new product distributed under the brand DESS and to specialize in the production of medical and dental parts. While searching for a partner for this new adventure, the company soon opted for Tornos. Why? This is because Tornos and its machines have earned an enviable reputation in the implant market and, most importantly, because Tornos Iberica provides excellent service.



Roger Terrats, describing the challenges in the dental field.



Three brothers, driven by the same passion: the production of high-quality prosthetic parts and dental implants.

“For our customers, the fact that we are using Tornos machines is proof of rigor”

“Our contact partners are competent and responsive to our problems; they know our products and are able to provide spare parts with an amazingly fast response,” emphasizes Roger Terrats, the company’s COO. “Our business started with Deco machines. They are really excellent machines, quite apart from the fact that, in our industry sector, the machines are not subject to too much wear and that we could thus resell them at a high price. Today, only few machines can be resold as they have been here 20 years or more, which is the best proof – if any such proof were needed of the high quality of the Tornos product. So one by one, we have sold our Deco machines in order to invest first in Gamma 20 machines and then in the Swiss GT 13 machines. Our current machine inventory consists of 23 machines while Terrats Medical has 52 employees. The new building enables us to think long-term and to extend our production area at will.”

A few facts about Terrats Medical

Terrats Medical is a company that has specialized in high-performance machining and produces 2.5 million parts per year. It has 1.4 million spare

With the conservation of the resources in mind, the company relies on a full building automation system including a roof covered with solar panels.



Terrats Medical's workshops – a paragon of brightness and cleanliness.

parts in stock, comprising more than 2,000 reference numbers (not including part families). The stock is fully computer-controlled and each item is stored with its own blister pack. Terrats Medical is certified according to ISO:9001 and ISO:13485 and has the CE and FDA approval as well as the Canadian CMDCAS certificate. In addition, Terrats Medical has the certifications required to produce OEM or OBL parts.

First and foremost, Terrats Medical stands for a vision, for listening to the customers and in-depth knowledge of the market as well as unconditional customer orientation. The company can provide you with solutions for specific problems and these solutions make all the difference. For some workpieces machined on the Gamma machines, several years have been spent to guarantee optimum benefits for the customer. The result?



One of the company's major strengths is the ability to always find innovative solutions to produce parts in the best manner.

Today, one 'simple' Gamma 20 with 6 linear axes does the work of a vertical high-performance machining center. The company is committed to the efficient use of resources both in terms of machining and machine utilization. And that's not all – even the roof of the company building has been designed with the sustainable use of resources in mind. It is equipped with photovoltaic solar panels and the complex building automation system ensures the most efficient use of resources.

An own brand

Terrats Medical does not only produce parts for renowned OEMs, it also has its own brand DESS – Dental Smart Solutions. The company has launched its own brand to specialize in abutments and other prosthetic parts for dental implantology. This brand is characterized by a vast and highly innovative product line-up. It has been certified in accordance with CE and FDA standards as well as with the standards of the Health Agency of Canada. DESS stands out for excellent workmanship; the innovative system has been granted a significant number of patents. The DESS R&D department is aware of the



Terrats Medical largely relies on Tornos machines to ensure the company's advancement.

production demands and thus can make the difference when it comes to think outside the box in order to find innovative solutions for the production of new components. The responsible experts have vast experience and can analyze any difficulties in detail, based both on their cumulative expertise and on extensive quality control. The parts manufactured undergo in-depth testing.



Both as regards DESS Dental and the production of implants or of prosthetic parts for OEMs, expertise is the very essence of Terrats Medical's activities. The goal is quite simple: it's all about accepting the challenges ahead and transforming them into a product. It's this flexibility that makes all the difference.

A long-standing partnership with Tornos

"22 years ago, our Tornos adventure began with the acquisition of a Deco 20 machine, a machine that accompanied us for more than 10 years. When we resold it, we incidentally found out that Tornos machines feature an excellent resale value, in addition to their outstanding reliability. The deciding factor to opt for Tornos as a partner was the service offered by Tornos Iberica. For them, response is a matter of seconds, and that really is far from being

standard practice in the Spanish market. We know we can count on the TTIB team at any time. Another decision criterion was the good reputation of Tornos, especially in the fields of medical and dental technology. For our customers, the fact that we are using Tornos machines is proof of rigor," the COO declares.

He continues: "Taking this into account, it is not surprising that we have continued our partnership with Tornos. While our current machine inventory mainly consists of Gamma 20 and two Deco 10 machines, we recently purchased eight Swiss GT 13 units with which we are extremely satisfied. They are very reliable and guarantee stable machining. The surface finish we can achieve is excellent too, and the new TISIS programming software is simply exceptional!"

"Since we have to program part families, we benefit from the TISIS library that enables us to change the workpiece set-up in no time. All our machines are provided with the Connectivity Pack that allows us to directly monitor the production status via mobile phone, and this may prove to be very useful."

"Thanks to our high flexibility, Terrats Medical is a rapidly growing business. In future, we will definitely continue to collaborate with Tornos," Roger Terrats summarizes.

terratsmedical.com
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Magnesium

& more on Swiss-type lathes

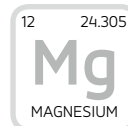
For some time now, magnesium has increasingly found its way into medical technology. This material has better mechanical properties than polymers; it is porous and bio-absorbable and thus avoids a physically demanding follow-up operation. However, the machining of magnesium requires maximum expertise, both by the user and by the machine manufacturer.

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Tornos is a pioneer in magnesium machining and with regards to the manufacture of medical components from magnesium; the company has an expertise that is unique on a global scale. Here, the applications range from the generation of bone tissue to the dental and orthopedic areas through to cardiovascular uses.

Therefore, the German social accident insurance institution for the metal range now places high demands on manufacturers that process magnesium. "The user has to make sure that only suitable machines are used for machining with geometrically defined cutting edges. The kind of manufacturing, the machining processes (dry or wet machining) and chip removal must all be intrinsically matched. The machining parameters should be chosen in a way to make sure the risk of ignition and dust formation are largely avoided. Machining parameters such as cutting edge geometry, tool sharpness, cutting speed, feed-rate and cooling must all be scrutinized. Besides the selection of the optimum machining parameters with regard to the generation of heat, the arrangement of nozzles for coolant supply and the quantity of cooling lubricant supplied are also essential."



Although magnesium can be machined with relative ease, it has a very annoying property. Magnesium dust and chips are highly flammable. Under certain circumstances, they can even be self-igniting. The smaller the particle size, the larger the corroding surface for atmospheric oxygen – this is the reason why magnesium dust is explosive when it reaches a certain concentration in the air.

Meeting specific challenges

For many years now, Tornos has been engaged in overcoming this problem and has gained an almost unique knowledge in the field of magnesium machining. For such applications, the experts in Moutier and Pforzheim (Germany) collaborate very closely with the specific customer and develop tailor-made solutions. When doing so, engineers are often faced with unknown customer-specific alloys as well as with short bars of low quality. Depending on the alloy, different chips can be expected. In this case, the integrated chip breakage cycles prove themselves. The particular kinematic system of the machines

permits low cutting speeds with less generation of heat. In medical technology, the penetration of coolant into the material is not allowed and the workpieces are usually dry machined. The Tornos product range comprises Swiss-type lathes specifically designed for dry machining that require only a few adaptations. In general, only the coolant lines are removed. These are replaced by pneumatic cooling nozzles. If machines are equipped with a specific chip extraction system and a bar feeder with fire extinguishing system, the machines are well prepared for the machining of magnesium.

With its automatic lathes, Tornos offers all-in-one solutions including various peripherals and tool systems for the efficient and highly productive manufacture of high-quality components made of magnesium. Based on standard machines, the machining process is individually optimized for each customer.

tornos.com



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MultiSwiss machines are ultra-performance machines with modular tool blocks that can be equipped with tool holders of various types that enable customers to realize a whole range of potential milling or even micro-milling tasks. Sometimes, the machining process generates lots of micro chips that accumulate in the filters of the machine. This can have a detrimental effect on the service life, especially when materials like brass are being machined. For such extreme cases, Tornos now offers a new option that enables filter wear to be reduced significantly, reducing costs, servicing and resulting machine downtime to be minimized.

Centrifugal filtration

The filtration system is housed in the container and allows the effective separation of any contamination particles from the oil by means of centrifugal force.

The device is incorporated elegantly in the container, be it on the MultiSwiss 8x26, MultiSwiss 6x32 or MultiSwiss 6x16.

Thanks to the high efficiency of this device, wear of the 5-micron filter is reduced by up to four times.

Benefits:

1. Extended service life of the filters
2. Reduced machine downtime
3. Reduced maintenance
4. Increased service life of the cutting oil

The new optional device is now available, and for detailed information, please contact your nearest Tornos representative.

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KENSON INDUSTRIAL PLASTICS:

Tornos packs a punch for
Plastic Part Producer

Back in 1979, an entrepreneurial greengrocer diversified into selling plastic packaging, which eventually became more profitable than ensuring Staffordshire residents were getting their daily portion of healthy eating. This soon set the foundation of Kenson Industrial Plastics Ltd, a company that evolved from healthy eating to packaging, and then on to the trading of plastic rods and tubes.



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Just a few years after the company was founded; a young machinist, Kevin Hutcheson joined the company. The son of the company founder and now the Managing Director, Kevin re-directed the business into machining plastics and the modern face of the Cannock based company now has a host of CNC turning centres that includes its latest acquisition, a Swiss DT 26 turning centre.

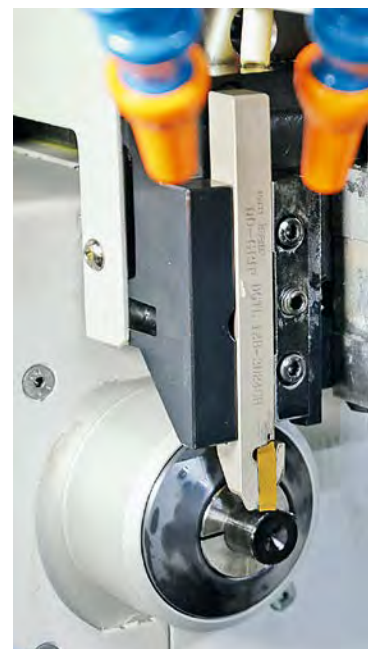
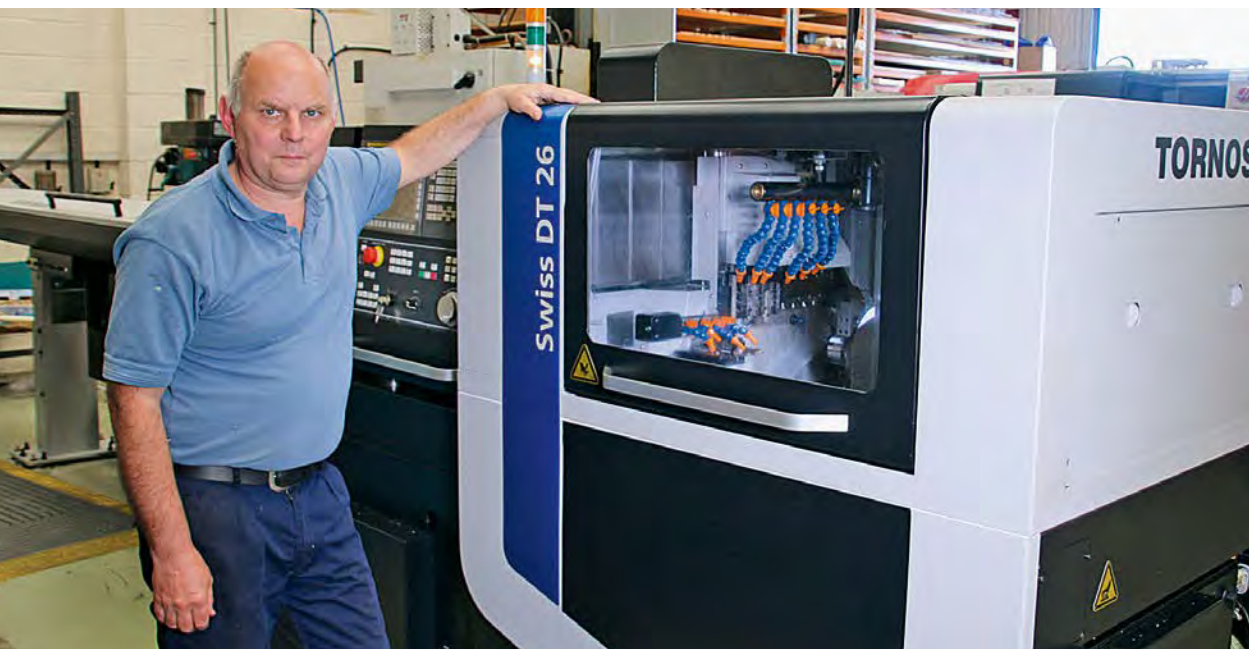
Kenson purchased its first CNC machine over 25 years ago to complement its capstan machines and now the business employs nine CNC machines that include HAAS, Hurco, Mazak and CMZ CNC milling and 65 mm diameter capacity turning centres. Machining spacers, rollers, washers, threaded gears, insulating pads and machine guarding from materials such as Nylon, Delrin, Ertalyte, Polyethylene, PVC, PTFE, PEEK, Torlon, Vespel and other plastics, the ISO: 9001 company produces anything from small batches up to production runs beyond 10,000-off.

“We looked at all the sliding head suppliers as well as a few other options, and the Swiss DT 26 fitted our business perfectly.”

It is here that the Swiss DT 26 has made all the difference. The four employee company won a contract to manufacture gear motor components in batches of 10,000 per month and this instigated the search for a new turning centre. Prior to buying the Tornos, the monthly quantity was tying-up one of the company's 65 mm capacity single spindle turning centres for 3 weeks every month. The small subcontractor wanted to free-up capacity on its 65 mm machine and produce parts faster to prevent any potential supply chain issues.

Commenting upon the search for a turning centre, Kenson Industrial Plastics Managing Director, Mr. Kevin Hutcheson says: “The parts being machined are only 12 mm diameter. We looked at all the sliding head suppliers as well as a few other options, and the Swiss DT 26 fitted our business perfectly. Other sliding head suppliers recommended running neat oil, which is standard for sliding head machines. However, Tornos said we could run the machine with either soluble or neat oil and as we machine plastic parts, we don't want staining from oil, nor do we want to clean oil from plastic parts. Tornos had instantly tipped the scales in their favour.”

Kevin Hutcheson, Managing Director of Kenson, with his new Swiss DT 26.



With five linear axes and two C-axes, another beneficial feature on the Swiss DT 26 was the integrated 20 bar pressure coolant facility with a high-pressure air blast. "Having such features integrated into the Tornos as opposed to optional extras reduced both the machine cost and footprint. The combination of a smaller footprint machine with integrated features and the soluble oil aspect had swung us towards Tornos. We preferred the Swiss DT 26 for these aspects but it was also the ease-of-use, machine kinematics, simple set-up tooling configuration and also the fact that Tornos are very local from a service perspective that sealed the business."

The machine instantly slashed the cycle time of the Ertalyte TX plastic gear components from 50 to 25 seconds per part, taking more than seven days off the previous monthly production schedule. Additionally, the facility to work with and without guidebush has reduced material consumption and with a changeover time in the region of 15 minutes, the customer can rapidly switch between modes to suit each batch run. Historically, Kenson has only operated on a single 8-hour shift basis; however the Swiss DT 26 has been supplied with the 3m barfeed and the Tornos Active Chip Breaker (ACB)

system for lights-out machining. Referring to this, Mr. Hutcheson says: "We've only ever run day-shift machining, but now we have the Tornos and its ACB system, we can look at unmanned running. At present, the Swiss DT 26 has halved our production times and freed capacity of the turning centre that was running the gear project. Additionally, the Swiss DT 26 has replaced an ageing EMI-MEC automatic turning centre and comfortably absorbed all the work the EMI-MEC was previously machining. For example, the production of 2,000 small rollers on the EMI-MEC machine would take 3-4 days; the Tornos produces four rollers a minute, meaning the job is finished in a single-shift. This machine was also dedicated to producing 3,000 spacers each week for electrical cabinets; we now produce these parts on the Tornos at least 50% faster than ever before."

The Swiss DT 26 has completely changed the way the subcontractor schedules its work, as Mr. Hutcheson says: "We have a monthly order for 2000 nylon conveyor belt parts with a previous output of 400 parts a day; this would tie-up one machine for more than a week per month. The Tornos can do more than 1000 parts a day, so we

Modular concept thanks to Swiss DT 26's gang-tool post.



Standard workpieces made of plastics and nylon produced by Kenson.



will produce 6000 in a week and hold the quarterly stock for the customer. There are many examples of how the Tornos has more than halved cycle times, however the key aspect is that the machine has freed capacity from all our larger turning centres.”

Kenson Catches a Winner

Kenson is building its confidence towards lights-out machining. When the company targets round-the-clock running, the Tornos is likely to improve throughput and capacity availability significantly on all machines. As the first turning centre with a twin-spindle, the Swiss DT 26 has reduced cycle times on more complex work. Referring to this, Mr. Hutcheson says: “We were apprehensive about the step to a twin-spindle machine but the Tornos TISIS software really simplifies the process. TISIS allows us to do a simple program for the main spindle and another program for the sub-spindle, once we have these foundations in place, TISIS prompts us to fill-in the remaining movements between the spindles. Furthermore, the machine operates with a Fanuc 31 Series CNC control unit that is familiar with all our machinists.”

The sub-spindle operation has improved precision, consistency, surface finishes and overall component quality whilst the TISIS system has simplified programming processes. However, it is a smaller feature on the Swiss DT 26 that is saving considerable time for Kenson - the part-catcher. “Plastic swarf is often long and stringy and without a part-catcher on our other machines, small parts would drop into the machine sump, leaving staff in a rescue attempt to redeem parts from the swarf. The Swiss DT 26 efficiently collects the parts and puts them into a bin outside the work envelope – it’s surprising how much of a difference some of these peripheral features can make to the everyday life of the machinist. We’re delighted with the Tornos, it’s been a great addition to our facility,” concludes Mr. Hutcheson.

kensonplastics.co.uk



Kenson is based in Cannock in the West Midlands, UK.

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TORNOS

SwissDECO 36

Impressive down to the tiniest detail and imposing as an entity, the new Tornos SwissDECO 36 is way more than a cluster of cutting-edge technologies brought to perfection. It represents the experience and the ingenuity of the Tornos engineers. This ultra-performance machine is able to machine bar stock with diameters up to 36 mm and features a 12-position turret that enables the most complex workpieces in the market to be machined.

tornos.com



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SwissDECO 36

We keep you turning