

TORNOS

TORNOS

*Letter to the shareholders
Management report 2019*

Tornos Group



TORNOS

TRAUB

TORNOS

We keep you turning

TORNOS

TORNOS

Die Zukunft wartet
Sind Sie dabei?

Sie sind begeisterungsfähig, dynamisch und haben einen positiven Spirit? Sie wollen den Unterschied ausmachen? Dann sind Sie bei genau richtig. Werden Sie unseres Teams!

Bewerben Sie sich jetzt unter www.tornos.com

Key figures

Tornos Group

In CHF 1'000*	2019	2018	Difference	Difference in %
Order intake	135'498	245'009	-109'511	-44.7%
Net sales	205'309	214'864	-9'555	-4.4%
EBITDA**	10'741	19'331	-8'590	-44.4%
<i>in % of net sales</i>	5.2%	9.0%		
EBIT**	6'431	15'486	-9'055	-58.5%
<i>in % of net sales</i>	3.1%	7.2%		
Net result	5'926	15'327	-9'401	-61.3%
<i>in % of net sales</i>	2.9%	7.1%		
Cash flow from operating activities	-26'992	19'116	-46'108	n/a
Cash flow from investing activities	-4'590	-5'661	1'071	18.9%
Free cash flow**	-31'582	13'455	-45'037	n/a
	31.12.2019	31.12.2018		
Net cash**	-874	35'663	-36'537	n/a
Total equity	107'809	105'356	2'453	2.3%
<i>in % of total balance sheet</i>	64.4%	59.8%		
Total balance sheet	167'507	176'247	-8'740	-5.0%
Employees (full-time equivalents)***	729	728	1	0.1%

* Unless otherwise stated

** Non-GAAP financial measure, refer to page 9 of the Annual Report 2019

*** Without apprentices

Tornos realigns market focus

Dear Sir or Madam, dear Shareholders,

Whereas the Tornos Group succeeded in reprising last year's strong business performance in the medical and dental technology segment and in the electronics industry, uncertainty in the automotive industry took its toll in the year under review. The numerous investment projects canceled or postponed in the industry left palpable traces in the accounts for the year.

The outlines of the automotive industry's transformation along with changing needs and requirements for machining equipment are becoming ever clearer. Consequently, in the medium and even long term Tornos sees better market opportunities and higher volumes for its high-performance Swiss-type automatic lathes and multispindle machines in the medical and dental technology segments and in the electronics and watchmaking industry. The Group's market focus is shifting accordingly.

Tornos' order intake declined sharply in the 2019 fiscal year. New orders from the medical and dental technology and electronics industries were unable to offset the pronounced drop in orders from the automotive industry. This also impacted net sales and profitability.

In the year under review, the Tornos Group posted total net sales of CHF 205.3 million (2018: CHF 214.9 million) and order intake of CHF 135.5 million (2018: CHF 245.0 million). Operating income (EBIT) for 2019 came to CHF 6.4 million (2018: CHF 15.5 million), and the net result was CHF 5.9 million (2018: CHF 15.3 million).*

In the Service unit Tornos saw further gains in almost every segment, including service, refurbishment and the used machine business. Only sales of spare parts saw a decline.

SwissNano 7 finds avid customers

Tornos successfully expanded sales of Swiss-type automatic lathes and multispindle machines produced in Switzerland in 2019. The response to the SwissNano 7, launched in the second half of 2018, has been highly gratifying. This product sets new standards in its class for compactness, ergonomics, energy consumption, tool consumption and low noise levels. The SwissNano 7 has found especially enthusiastic customers in the dental technology and high-tech electronics sectors. It is used, for example, for the production of dental implants or for the manufacture of sophisticated connectors in communication and measurement technology.

In 2019 Tornos advanced the further development of its scalable, user-friendly TISIS machine programming and communication software, producing several product add-ons and updates. At present 1'800 Tornos machines already feature TISIS.

Following its recent successful product launches, Tornos is already preparing the next burst of innovation in 2020.

* Non-GAAP financial measure, refer to page 9 of the Annual Report 2019



New customer centers throughout the world and centralized production of Swiss machines

While the Tornos Group has had new customer centers in Chicago, USA and Bangkok, Thailand since May 2019, a new center near Milan, Italy will follow in the first quarter of 2020. A further customer center is scheduled to open in Pforzheim, Germany in 2022. These centers underscore Tornos's commitment to customer proximity worldwide.

In the year under review Tornos invested to centralize production of Swiss machines at the main site in Rue Industrielle, Moutier, expanding the plant and simplifying processes. All Tornos machines produced in Switzerland are now assembled at this plant, which successfully underwent ISO 9001 recertification in the year under review. Tornos also completed renovation of its office building the same year and sold the factory building in Rue de l'Ecluse, Moutier. By outsourcing a portion of the Moutier warehouse and associated logistical functions to a specialized company, Tornos enhances its own flexibility.

Tornos Academy

The Tornos Academy in Moutier developed very nicely in the year under review, offering Tornos customers and employees tailor-made training to get the most out of Tornos products. Classes customized to customers' individual needs and wishes are offered at all Tornos locations. If customers prefer, the classes can also be held on their own premises. Over 600 people have already successfully received training in the Tornos Academy.

The i-moutier incubator

The Moutier incubator in the Tornos Precision Park is a microtechnology collaboration platform which brings together universities, institutions, start-ups and partner companies. The incubator provides access to the concentrated know-how of an entire region to Tornos customers and partners. The first projects have already been concluded successfully. For example, several manufacturers from the region have jointly developed a cell for integrated production. The CHARM project, which receives support from the EU and is being carried out together with the CSEM (Swiss Center for Electronics and Micro-technology), is investigating the measurement of oil-smearred parts. In the MUSE project, a number of machine manufacturers and other local partners are working on a joint software solution for updating machinery.

For the second time Tornos held an innovation competition for engineering students at HE-Arc Neuchâtel, creating opportunities to get to know Tornos and work on concrete projects with experienced professionals. Once again the competition yielded numerous interesting ideas and new approaches to implementation.

Expansion of locations in Asia

The expansion of the location in Taichung, Taiwan, into a fully autonomous plant capable of complete assembly of all machines in the Swiss GT product line had a positive impact on process quality and operational flexibility at the facility. By the second half of 2019 the plant was already operating at full capacity.

In April 2019 Tornos resolved to independently develop its subsidiary in China, Tornos (Xi'an) Machine Works Co., Ltd. and to buy back the 30% minority share capital stake held by the Chinese company Shaanxi Robot Automation Technology Co., Ltd. This purchase was completed in January 2020. Tornos also moved into new premises in Xi'an during the year under review.

The social and economic consequences of the coronavirus from China cannot be fully predicted at present. With its production site in Taiwan, the Tornos Group is able to relocate product lines from China to Taiwan.

Distribution to shareholders

Given the current economic situation, the Board of Directors will not be proposing a dividend distribution.

Outlook for 2020

The Tornos Group enters the new fiscal year with a significantly slimmer order book than one year ago. Recent geopolitical developments are generating considerable uncertainty, significantly hampering efforts to formulate assessments and forecasts at the moment. Visibility in the markets is currently very low. However, with a range of products and services carefully tailored to customer requirements, Tornos remains well equipped to respond rapidly and efficiently to developments in each market.



François Frôté
Chairman of the
Board of Directors



Michael Hauser
CEO and Chairman of
the General Management

“Tornos remains well equipped to respond efficiently to the developments in the markets.”



Board of Directors: 
Walter Fust, François Frôté,
Till Fust, Michel Rollier

Management report 2019

The global economy cooled noticeably in 2019 after the 2018 boom, and the outlook for fiscal year 2020 appears extremely difficult. Uncertainty is particularly great in the automotive industry. Car sales have declined worldwide in the past year, especially in Asia, the biggest market for automobiles. Many investment projects in the industry have been cancelled or postponed, with most companies now investing only to the extent absolutely necessary. But alongside the automotive industry there are also industries where the investment climate remains positive: medical and dental technology, for example, or the electronics industry. New applications are emerging almost daily in these innovative markets. This can benefit the mechanical engineering sector, including Tornos.

Fiscal year 2019 was a very uneven one for Tornos. After a strong first half with high net sales and encouraging profitability, the situation worsened noticeably in the second half of the year. Order intake from the automotive industry dropped sharply, with new orders from the medical and dental technology and electronics industries unable to offset the pronounced decline. This loss of orders impacted net sales and profitability.

Tornos has initiated extensive measures to achieve an acceptable return despite the anticipated lower net sales in 2020.

Order intake and backlog

The Tornos Group's order intake of CHF 135.5 million for fiscal year 2019 was 44.7% below the previous year's level (CHF 245.0 million). At CHF 58.6 million,

the figure for the second half of the year falls well short of the first half's CHF 76.9 million. Various orders for new Tornos machines from the automotive industry were canceled or postponed. Tornos sold fewer machines than the year before in all regions, with the greatest setbacks occurring in Europe.

The automotive industry has always been the most important market segment for Tornos in recent years. In 2019, however, the segment contributed only 8.6% of total machine order intake (previous year: 42.9%). The medical and dental technology sector's share grew from 12.9% to 28.4% in the same period. Tornos achieved gratifying sales successes in this segment in 2019. Chances are again good for new customer orders in the current year, thanks especially to the innovative Swiss Nano machine line. The percentage share for the electronics market segment rose from 9.6% to 16.6%. In absolute figures, however, Tornos fell somewhat short of the order value from the successful year 2018. The same is even more true of the watchmaking industry market segment. Although its percentage share rose from 9.3% to 9.6%, in absolute figures order value fell by half. The remaining 36.8% (previous year: 25.3%) came from subcontractors (known as job shops) that supply parts to the four industries mentioned above and from smaller markets such as aviation, pneumatics, and hydraulics.

Tornos suffered a decline in sales for most product lines in the year under review, although the Swiss Nano line and two machine types produced in Asia did see gains over the previous year. In unit terms 49% of the machines sold in 2019 came from Asia, and 51% from Switzerland.

As a result of lower order intake in 2019 and higher net sales in the first half of the year, the order backlog contracted significantly. As at December 31, 2019, this figure was CHF 34.2 million (December 31, 2018: CHF 101.0 million).

Net sales

Tornos Group net sales slipped by 4.4% in the year under review, from CHF 214.9 million in 2018 to CHF 205.3 million (CHF -9.6 million; CHF -7.7 million after adjusting for exchange rates). After a very strong first half with sales of CHF 117.2 million, the Group generated a further CHF 88.1 million in sales in the second half of the year. Sales of machines manufactured in Moutier grew by 2%. Tornos saw a slight gain in multispindle machines, a significant gain in (single-spindle) Swiss-type automatic lathes. Sales of Tornos single-spindle machines produced in Asia contracted for the first time since the start of production in the region.

Compared with the previous year, Tornos Group net sales shrank by 7% in Europe, and by 21% in Asia (including the rest of the world). In the Americas net sales were up 53%. Net sales in Switzerland, where Tornos invoiced 13% more than in 2018, were gratifying as well. Overall, the Tornos Group's net sales break down as follows across the different regions: Switzerland 22.8% (previous year: 19.2%), rest of Europe 53.3% (previous year: 59.4%), Asia (including rest of world) 11.2% (previous year: 13.4%), Americas 12.7% (previous year: 8.0%).

In the service and spare parts business, Tornos saw further gains in almost every segment in 2019, with only sales of spare parts declining. Overall, net sales

“In the service business, Tornos saw further gains in almost every segment.”

fell from the previous year's CHF 46.7 million to CHF 45.8 million. In the service, refurbishing, and used machinery subsegments Tornos saw gains over the previous year (CHF +1.7 million). In the coming years Tornos intends to further develop the services segment.

Gross profit

In the fiscal year just ended, the Tornos Group generated a gross profit of CHF 66.4 million (previous year: CHF 73.6 million), of which CHF -3.3 million was attributable to the lower sales volume. The margin declined by 2.0 percentage points, from 34.3% to 32.3%, accounting for CHF -3.9 million of the fall in sales. The main reason for this noticeable deterioration was the building of provisions on inventories due to the increase in inventories (CHF 2.5 million). These provisions are based on calculation and will be released as soon as inventories are reduced. In addition there were moving expenses of roughly CHF 0.3 million from the relocation of a significant portion of raw material inventories to a central distribution point. The remaining CHF 1.2 million consists of expenses which, due to the decline in orders from the automotive industry, can only be reduced or eliminated with a certain delay. These expenses should no longer be incurred in the 2020 fiscal year.

Operating expenses

The Tornos Group's operating expenses increased by CHF 2.2 million in 2019 to CHF 60.0 million (previous year: CHF 57.8 million). Marketing and sales expenses rose by CHF 1.0 million from CHF 30.3 million to CHF 31.3 million. This includes new hiring in the Service unit to further expand services for customers. General administrative expenses grew only slightly. Research and development expenses remained stable. The other expenses item totals CHF 0.6 million, attributable in large part to an increase in doubtful receivables. In the previous year Tornos recognized the sale of trademark rights and production machines in other income.

Research and development

At CHF 10.1 million, research and development expenses in 2019 remained at the same level as in the previous year (2018: CHF 10.1 million). Tornos successfully continued its various innovation projects, both in the multispindle sector as well as on Swiss type automatic lathes.

In 2019 Tornos also advanced the development of its scalable, user-friendly TISIS machine programming and communication software, releasing several product add-ons and updates. These include additional functions for a module with a six-axis robot connected directly to the machine for automatic loading, unloading, palletization and pallet handling. At present 1'800 Tornos machines already feature TISIS.

Non-operating income

Non-operating income comprises expenses and revenues from the Tour Bechler investment property. At present leases have been concluded for all 23 newly built residential units. Tornos plans to sell the property in the foreseeable future.

Tornos sold the factory building in Rue de l'Ecluse, Moutier. Because the final payment for the real estate sale was only received in January 2020 and not in December 2019 as expected, the proceeds in the amount of approximately CHF 3 million will be reflected in Tornos's profit figure only in 2020.

EBITDA and EBIT*

Earnings before financial expenses, tax, depreciation and amortization (EBITDA) came to CHF 10.7 million for 2019 (previous year: CHF 19.3 million), with an EBITDA margin of 5.2% (previous year: 9.0%). Earnings before financial expenses and tax (EBIT) amounted to CHF 6.4 million (previous year: CHF 15.5 million; CHF -9.1 million; CHF -9.6 million after adjusting for exchange rates), resulting in an EBIT margin of 3.1% (previous year: 7.2%).

* Non-GAAP financial measure, refer to page 9 of the Annual Report 2019

Financial income

Tornos generated net financial income of CHF -0.2 million in the 2019 fiscal year (previous year: CHF -0.2 million). Currency effects, particularly in relation to the US dollar, had a positive impact of CHF 0.2 million in the year under review; this compares with a positive effect of CHF 0.4 million in the previous year.

Net income

After deducting income tax of CHF 0.5 million, net income came to CHF 5.9 million (previous year: CHF 15.3 million). The margin stood at 2.9% (previous year: 7.1%).

Balance sheet

Compared with the previous year, the balance sheet total as of December 31, 2019 contracted by CHF 8.7 million to CHF 167.5 million.

On the asset side, cash and cash equivalents declined by CHF 21.5 million. A large portion of the cash was converted to net working capital. Trade receivables fell by CHF 7.8 million due to lower fourth-quarter sales compared to the previous year. Inventories, by contrast, expanded by CHF 20.3 million. The increase took place in raw materials, which accumulated when orders declined while materials and components had already been purchased (CHF +8.0 million), and in finished machines, which increased by CHF 14.8 million. Tornos intends to be prepared for rapid deliveries once the market picks up. Other amounts due and prepaid expenses fell by CHF 0.4 million.

Fixed assets were CHF 0.3 million higher at the end of 2019 than at the end of 2018. In the fiscal year just ended Tornos principally invested in buildings in Moutier (Welcome Center, Tech Center, Tour Bechler). Intangible non-current assets increased by CHF 0.3 million. This item comprises Tornos investments in software and computer hardware.

On the liability side, financial liabilities grew by CHF 15.0 million. As a result of the CHF 41.0 million increase in net working capital, a large portion of cash and cash equivalents shifted into this item. To bridge the gap, Tornos borrowed CHF 15.0 million from its main shareholder. Trade payables fell by CHF 4.1 million in consequence of the contracting business volume. Other liabilities likewise dropped sharply, due in large part to fewer advance payments received (CHF -20.1 million). Deferred income and current provisions declined by CHF 1.0 million. Non-current liabilities remained at the previous year's level.

On December 31, 2019, net cash* stood at CHF -0.9 million (previous year: CHF +35.7 million).

Shareholders' equity was CHF 107.8 million on December 31, 2019 (previous year: CHF 105.4 million), with minority interests accounting for CHF 0.4 million (December 31, 2018: CHF 0.5 million). The decline in the balance sheet total resulted in an increase of 4.6 percentage points in the equity ratio, to 64.4%.

Cash flow

In contrast to previous years, Tornos' cash and cash equivalents developed negatively in 2019. Cash flow from operating activities before change in net working capital came to CHF 14.0 million, only CHF 3.1 million less than the previous year (CHF 17.1 million). A large amount of cash was tied up in the CHF 41.0 million increase in net working capital in the year under review. This was largely the result of the expansion of inventories (CHF 22.8 million) and contraction of other liabilities (CHF 22.4 million). Customer advance payments declined sharply with the fall in order intake. As a result, cash flow from operating activities in 2019 came to CHF -27.0 million (previous year: CHF +19.1 million). Tornos spent a net CHF 4.6 million on investing activities in 2019 (previous year: CHF 5.7 million). Investments were principally undertaken in buildings (Welcome Center, Tech Center, Tour Bechler) as well as in software and computer hardware. Free cash flow* amounted to CHF -31.6 million in 2019 (previous year: CHF 13.5 million).

* Non-GAAP financial measure, refer to page 9 of the Annual Report 2019

To cover a portion of this large cash outflow, Tornos turned to its main shareholder for a bridge loan of CHF 15.0 million. In 2019 Tornos Holding AG distributed a dividend totaling CHF 5.4 million (previous year: CHF 2.9 million). In addition the Group sold treasury shares in the amount of CHF 0.7 million (previous year: CHF 1.9 million). Most of these shares went to employees under the Group's Management and Board Participation Plan. This left net cash flow of CHF -21.6 million at the end of the 2019 fiscal year (previous year: CHF 12.3 million).

Risk management

The Tornos Group maintains a comprehensive risk assessment system that covers both strategic and operational risks. Further details may be found on pages 21 to 23 of the 2019 Annual Report.

Employees

On December 31, 2019, Tornos employed 729 people (full-time equivalents) and 35 apprentices. At the end of 2018, it had 728 employees and 44 apprentices. While headcount in Switzerland declined by 16 FTEs due to a reduction in temporary employees, Tornos increased hiring by the same amount in the service category in its foreign subsidiaries. This resulted in a further expansion of services for customers.

The average number of employees during the year under review was 747 (2018: 692). Whereas headcount expanded steadily during the first half of 2019 to keep up with the heavy workload, it contracted again in the second half as order intake declined. Most of the changes took place among temporary staff.

The employees of the Tornos Group are satisfied with their working conditions and value the commitment shown by their employer in this respect. These were the findings of an employee survey conducted in 2016. Tornos will carry out the next such survey in 2020.

Outlook

The Tornos Group enters the new fiscal year with a significantly slimmer order book than one year ago. Recent geopolitical developments are causing considerable uncertainty, making it extremely difficult to formulate assessments and forecasts at present. However, with a range of products and services carefully tailored to customer requirements, Tornos remains well equipped to respond rapidly and efficiently to developments in each market.

Industry 4.0 and Tornos

As Industry 4.0—also known as the fourth industrial revolution and smart factories—dawns, Tornos is extending its innovation legacy beyond its Swiss-type, multispindle, and micro-milling technologies with its TISIS machine communication and programming software as well as its involvement in the umati (universal machine tool interface) initiative to make machine tool data usable.

TISIS: our Industry 4.0 portal

Tornos' TISIS software is manufacturers' portal to the production efficiencies envisioned by Industry 4.0. With TISIS, machine operators have a more interactive means of interfacing and intervening to manage unexpected situations. This smart and advanced ISO code editor puts machine operators on the fast track to truly effortless programming and real-time process monitoring. TISIS knows the customer's Tornos machine fleet and can help the machine operator decide which machine to use for a specific part and, at the same time, enables the user to assess each machine's options. TISIS reduces collisions and related downtime, eliminates the possibility of errors, and enhances customers' productivity, efficiency and quality. Together with customers, Tornos sets the course for extremely productive, reliable, and error-free manufacturing: Industry 4.0.

umati: a new dimension in networked production

At EMO Hannover 2019, Tornos was among 72 machine tool manufacturers from all over the world demonstrating umati and the benefits of this standardized interface. The networking of machines, systems and software is one of the most important trends in manufacturing. Today's customers expect to be able to integrate new machines into their own information technology (IT) ecosystems with no difficulty.

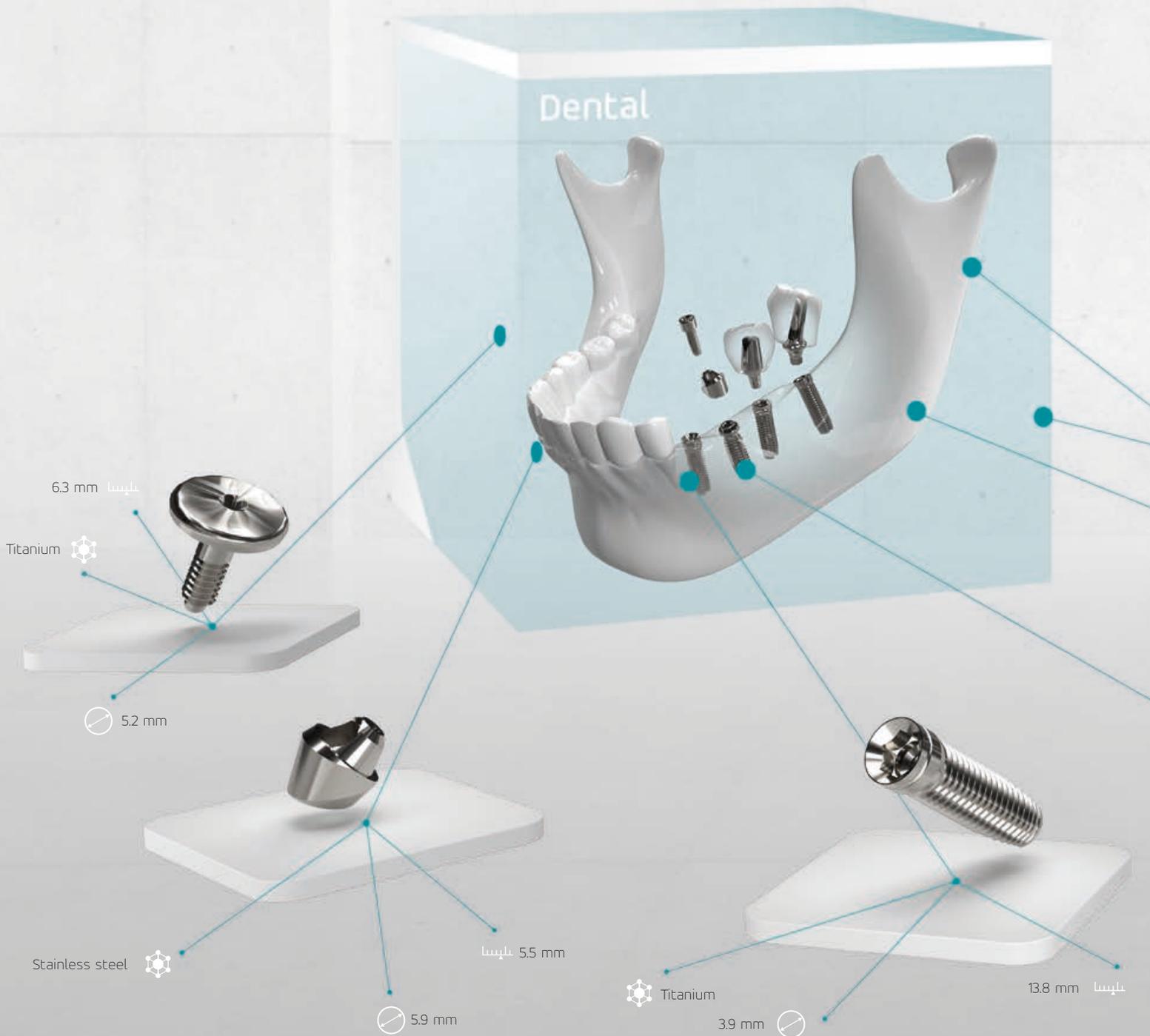
umati does this easily, quickly and securely based on the Open Platform Communications (OPC) Unified Architecture (UA) international interoperability standard. With TISIS and umati, Tornos underscores its technology leadership—and its brand promise, We keep you turning—by helping manufacturers future-proof their operations with digitalized processes to drive quality, reduce costs, ramp up efficiency, errors eliminate errors.



Unique solutions for targeted segments

DELIVERING UNIQUE SOLUTIONS FOR TARGETED, FAST-GROWING MARKET SEGMENTS IS A KEY PILLAR OF TORNOS' BUSINESS STRATEGY AND ANOTHER WAY OF HONORING ITS CUSTOMER PROMISE, WE KEEP YOU TURNING.

MANUFACTURERS IN MICROMECHANICS, MEDICAL & DENTAL, AUTOMOTIVE, AND ELECTRONICS FACE A VARIETY OF MACROECONOMIC TRENDS IN TODAY'S INCREASINGLY COMPETITIVE GLOBAL MANUFACTURING ENVIRONMENT—AND TORNOS' SOLUTIONS MAKE A KEY CONTRIBUTION TO THEIR CONTINUED SUCCESS.



MEDICAL & DENTAL

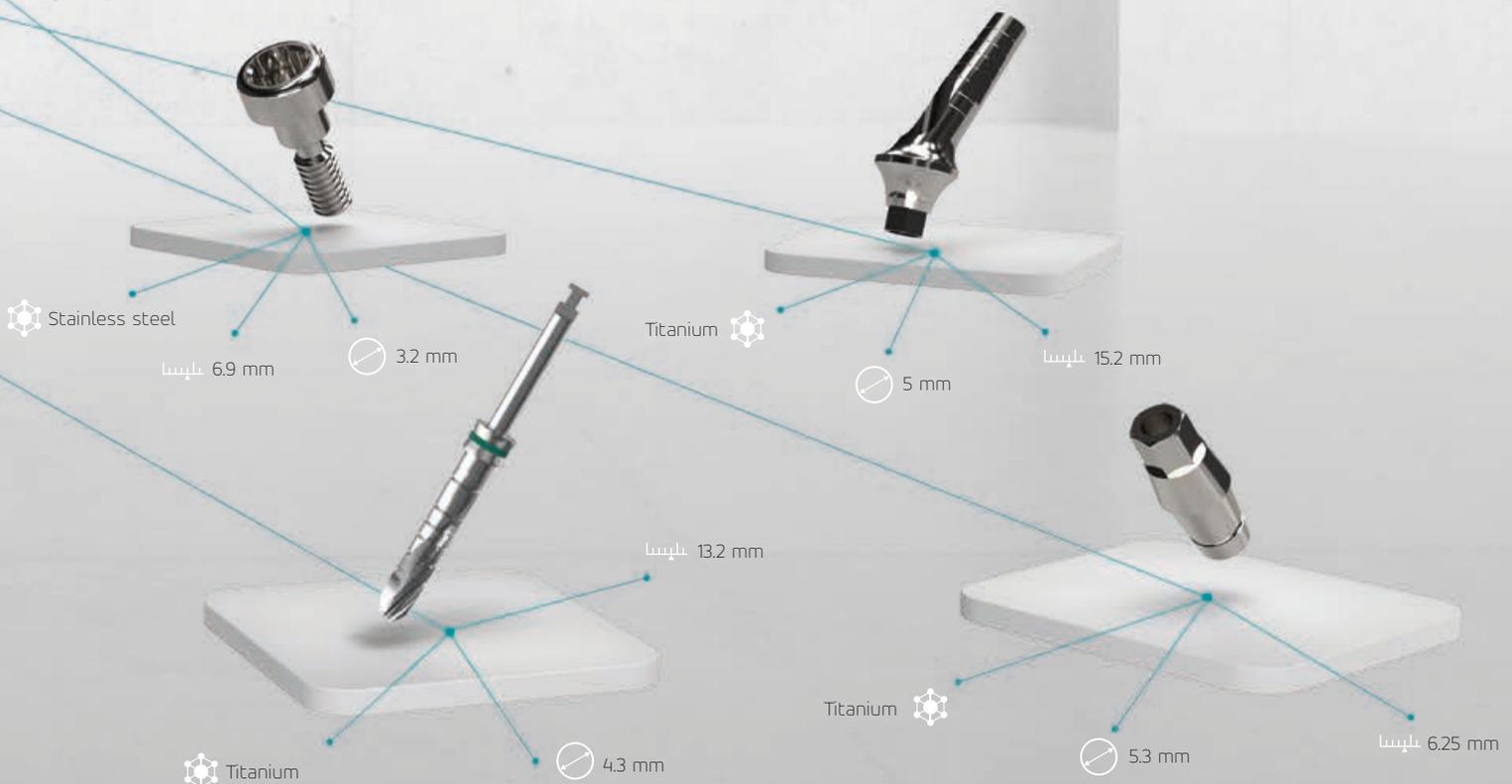
We are medtech manufacturers' partner at the frontier of innovation

From changing demographics and globalization to the accelerating pace of technology diffusion and innovation, macroeconomic forces are shaking up the status quo and creating opportunities—and pressures—for medical device and instrument manufacturers. Global medtech sales, representing just a slice of global worldwide health care spending, are forecast to grow by 5.1 percent to US \$522 billion by 2022.

Dental implants

Dental implants do far more than ensure a nice smile. They restore quality of life and comfort while slowing or stopping bone loss. These implants, including bone screws, abutments and locking screws, must be biocompatible and able to withstand the variety of compressive, tensile and shear forces of biting and chewing.

Tornos' mastery of Swiss-type lathe kinematics ensures the flawless results dental implant manufacturers expect, even on challenging parts like dental abutments. Screws used to anchor dental implants present challenges similar to those in other medical applications and today's Swiss-type lathe kinematics offer a B-axis system to produce the necessarily complex milled forms. Other benefits include one-setup machining, reduced production time and better geometric tolerance, high surface finishing in both roughing and finishing, and easy programming. That's what we call flexibility.



ELECTRONICS

We connect electronics manufacturers to success across myriad applications

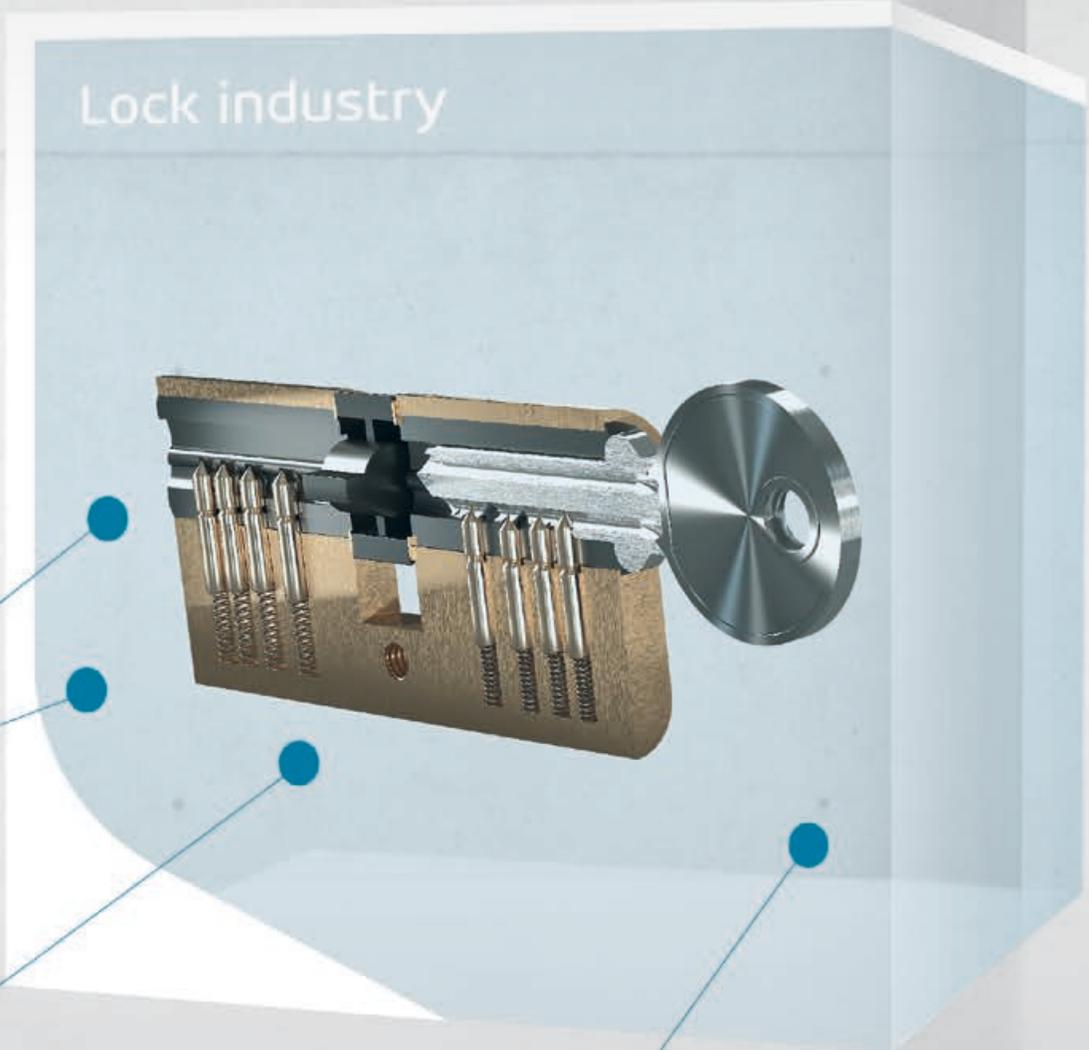
A global innovation boom in connectivity is underway, with remarkable strides being made in everything from connected clothing and consumer electronics to medtech, energy, automotive and industrial applications. Connected medical devices, smart cities leveraging data and technology to achieve efficiency, sustainability, economic development and greater security and life quality, connected cars, and the Industrial Internet of Things (IIoT) are just a few examples.

Lock industry

Gone are the days when the typical home was left unlocked. Home security is a rising concern and perfectly manufactured door locks protect both possessions and peace of mind.

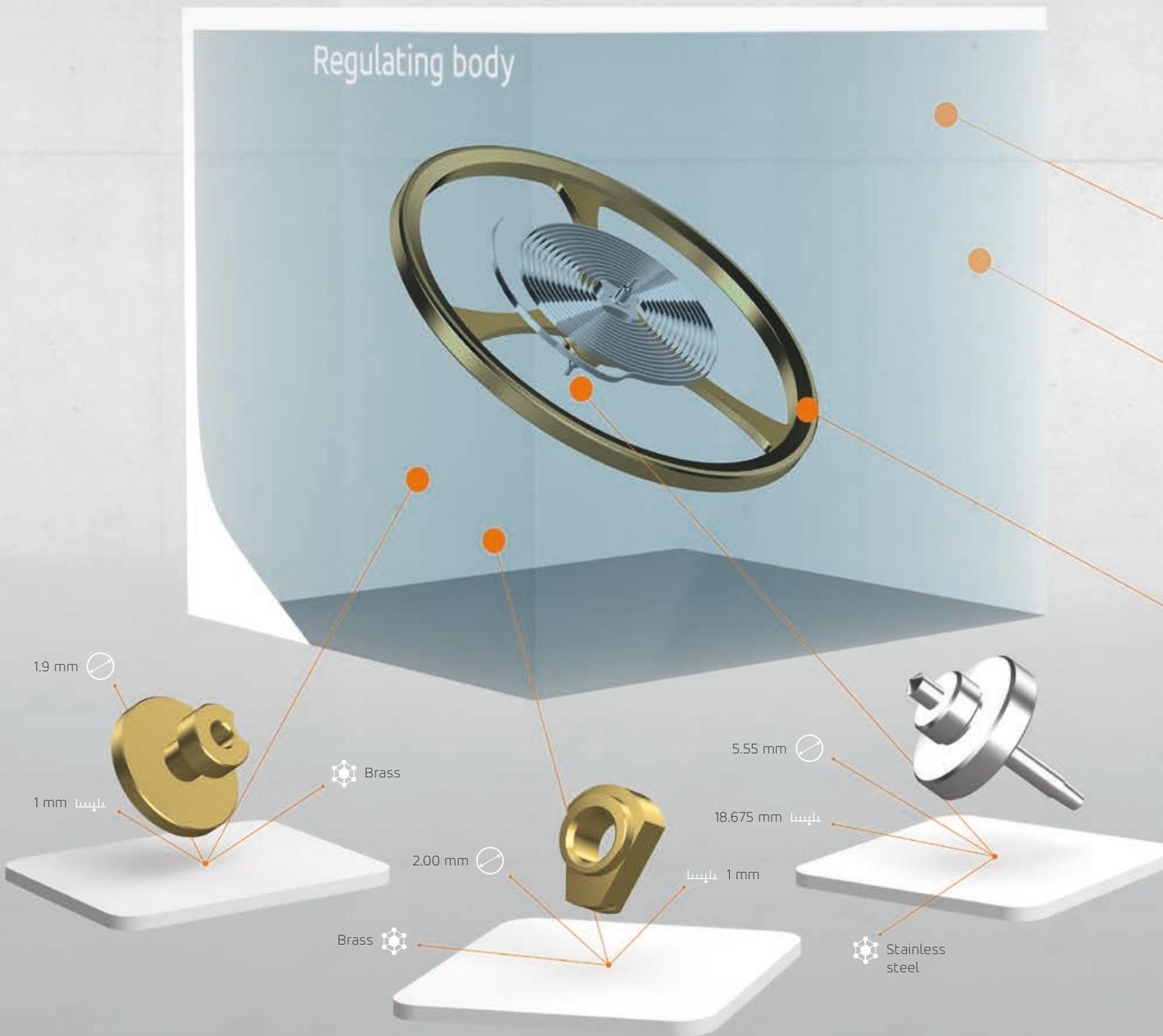
Tornos helps manufacturers lock up their success in the home security market, thanks to our deep lock industry experience extending from the key to the complete lock body, including gears that are precisely and efficiently machined from a wide variety of materials. Fully customized brass parts are a key Tornos competence—and that expertise doesn't end with brass. Our smart clamping solutions enable customers to produce the full lock body and—as electronic lock systems become increasingly complex—our full portfolio of turning solutions positions them to produce the market's most demanding locks today and well into the future.





MICROMECHANICS

*We ensure watchmakers' success,
time after time, to the tiniest detail*





Material



Diameter (in mm)

طول (in mm)

Emerging from a slow growth period, the Swiss watchmaking industry today is asserting its relevance in an increasingly digital world. At the same time, the industry is under pressure to cope with the many challenges of globalization while satisfying both its long-time customers and new, empowered and tech-savvy consumers.

Watch regulating body

The balance and spring assembly are the true heart of the watch. The balance regulates the passage of time thanks to its oscillations and is responsible for the precision of the watch.

It consists of a two - or three-arm armature statically coupled with a spiral (steel) spring thinner than a hair. The pendulum performs a circular to and fro movement and divides the time into equal units. The anchor gives the impulse to the escape wheel to make a rotation. During this rotation, the spiral is compressed, balancing the force sent. Then, the spiral relaxes and forces the balance to go back. The principle of reciprocation is realized as an oscillation. The tiniest brass, stainless steel, and gold watch components owe their precision to Tornos' legacy of service to the Swiss watchmaking industry.



AUTOMOTIVE

We put automotive manufacturers on the road to greater quality, safety and sustainability





Material



Diameter (in mm)

الطول Length (in mm)

Key global megatrends are driving demand for greener, safer, smarter vehicles and positioning the automotive industry for growth. These trends are changing the face of the automotive industry and setting the course for Automotive 4.0. Automakers and their supply chains are under pressure to meet growing demand in developing and emerging markets, while meeting increasingly stringent fuel efficiency and emissions mandates. Increased fuel efficiency, endless power train advancement, light-weighting of vehicles, and developing new technologies to support the demand for electromobility are key challenges.

Braking system

With global car ownership soaring, especially in developed nations, active safety systems play an essential role in collision prevention. Automakers and their supply partners consistently turn to Tornos for the highly reliable turning technologies necessary for precisely machining braking system components.

The braking system, a key safety element, has become more and more sophisticated, incorporating various anti-slip technologies like anti-lock braking systems (ABS), traction control systems (TCS), kinetic energy recovery systems (KERS), electrical hand brakes and integrated braking systems. In addition, to these technological challenges, braking systems today must be lighter to consume less fuel and curb CO₂ emissions. Tornos Swiss-type and multispindle lathes are the solutions of choice for automotive supply partners responsible for producing the small, primarily aluminum and stainless steel components critical to these systems. A big advantage: Tornos automation solutions take the headache out of loading cold-forged parts.



Milestones 2019

State-of-the-art Welcome Center opens in Moutier

Since January 2019, Tornos' new, state-of-the-art Moutier Welcome Center, with its welcome hub and meeting rooms throughout the ground floor of the administrative building, has welcomed numerous visitors. Tornos agents from northern and eastern Europe made use of these high-tech rooms during two days of training, as did some VIP customers from Italy during a two-day seminar. Thanks to the new meeting rooms and a newly refurbished reception area, Tornos' flagship headquarters in Moutier is aligned with Tornos' brand, which is a synonym for quality, productivity, precision and efficiency. Like all the new Tornos customer centers, it reflects the company's expertise.



January to March



MultiSwiss 6x16: 300 now in use

The 300th MultiSwiss 6x16 headed to its new home in Germany in March 2019. A true revolution in the multispindle field, this machine has made its mark on the market. Launched in 2011 when multispindle technology was still considered extremely complex, the MultiSwiss has definitely found its following. The machine debuted at EMO Hannover 2011, and today it is renowned for its great ergonomics and machining performance. These characteristics prompted Richard Moser KG Präzisionsdrehteile, based in Bubsheim, Germany, to invest in the MultiSwiss 6x16. Director Richard Moser acquired the first MultiSwiss 6x16 at the EMO Hannover 2011 – and the 300th MultiSwiss 6x16 produced. The acquisition brings his MultiSwiss 6x16 fleet to an impressive 15 machines.



The Medical & Dental sector has the wind in its sails

Tornos has received major orders from key players in the medical sector, particularly for the brand-new SwissNano 7. The economical, environmentally friendly and ultraflexible SwissNano 7 meets medtech component manufacturers' needs and, with the smallest footprint in its category, boosts productivity per square meter in any workshop. This compact, agile machine has already been a big success in the market, especially in Medical & Dental, where it is playing a role in some important projects. A solution for machining magnesium for the medical sector was also developed and offered to our customers for the first time in the first quarter of 2019.

Tornos inaugurates new Customer Center Chicago

Tornos' new Customer Center Chicago officially opened in Des Plaines, Illinois (US) in May, with guests from the world of machine tools on hand for the opening ceremony. This new center enables Tornos to better serve its customers and is an essential link in Tornos' strategy in the US, where the Group celebrated 60 years of service in 2019. During the two-day open house, customers and other guests toured the new Customer Center Chicago. Activities included state-of-the-art industry seminars focusing on a range of topics, including medical, automotive and electronics. The new SwissNano 7 made its US debut as a highlight of the grand opening and 60th anniversary celebrations.



Tornos' Patrick Neuenschwander awarded prestigious prize

Patrick Neuenschwander, Tornos software and hardware Engineer and Software Development Manager, received the "Industry 4.0 - The Shapers" award in June 2019 from ManufactureThinking.ch in recognition of his role as an industry pioneer in French-speaking Switzerland. Patrick Neuenschwander began his career at the Swiss company with an apprenticeship at the Tornos Professional Center. He was then involved in the development of the TB-DECO control software for DECO turning machines, and in various other projects. With this experience, he and his team laid the foundations for the new TISIS collaborative platform a few years ago.



IMC 2019: A whole day for new mobility concepts

The Intelligent Manufacturing Conference (IMC) 2019 at the Kraftwerk in Rottweil, Germany kept all its promises. An impressive panel of experts addressed the future of mobility and how the automotive industry can cope with the challenges ahead. Organized by Tornos, the event was a great success. The participants appreciated both the four outstanding expert presentations and the interesting discussions. Thanks to the experts' presentations, the participants benefited from several years of mobility research concentrated in the one-day event. Following the presentations, a panel discussion led by journalist and digital economist Katrin-Cécile Ziegler provided constructive insights into the various points of view and provided the highlight of a rich and well-rounded morning.

Q2

April to June

EMO Hannover 2019: Tornos unveils intelligent solutions for tomorrow's production

With a futuristic approach, EMO Hannover 2019 showcased tomorrow's technologies, particularly in terms of production. The event was undoubtedly the largest industrial exhibition of the year, bringing manufacturers from all over the world to Hannover, Germany. As a direct response to customers' demands for a compact, all-in-one chucker solution to increase their flexibility and the economic feasibility of working with billets, Tornos debuted its all-new and impressively compact MultiSwiss 6x32 Chucker lathe at EMO Hannover 2019. The aim of this concept is to allow execution of special shapes and finishing of parts with precise turning and limited roughing operations. Along with the SwissNano 7, Tornos' EMO Hannover 2019 presence featured solutions such as the SwissDECO 36 TB, a true standout due to its highly advanced performance. Additionally, Tornos was among 50 machine tool manufacturers from all over the world demonstrating how umati (universal machine tool interface) makes machine data usable.



Technology challenge brings students face-to-face with industry

Around 40 students from Haute École Arc (HE-Arc) Neuchâtel took up a real technological challenge in the favorable environment of the i-moutier incubator in August. For the second time, instructors at this university of applied sciences in the Jura region asked Tornos to put their students' theoretical knowledge into practice in the field. The participants' initiative, creativity, boldness, inventiveness, team spirit and group dynamics were put to the test and evaluated, and the top three teams took home a cash prize.



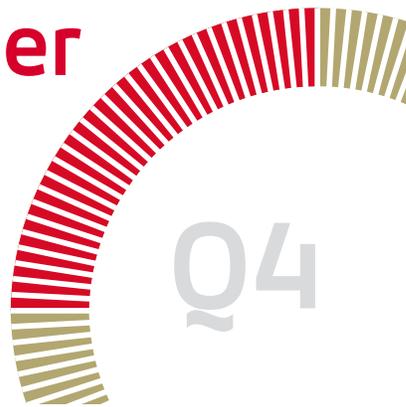
Q3
July to
September



Tornos officially opens its new Customer Center Bangkok

Tornos Technologies (Thailand) Co. Ltd. officially opened its new Customer Center Bangkok in August. The new Customer Center Bangkok is much larger than its predecessor, and its showroom perfectly accommodates the entire range of current Tornos products. Tornos officially established itself with the opening of Tornos SA Thailand in Sukhumvit in 2007, providing support to customers in Thailand and the rest of Southeast Asia, as well as India. Thailand's economic contribution to the machine tool market may not be widely known, but it is an important one. Thailand, as Southeast Asia's largest vehicle producer, is an important hub for automotive manufacturers. Other industries that are well represented in Thailand are Medical & Dental, Electronics, and Micromechanics.

October to December



Tornos receives ISO 9001 recertification

Based on a number of quality management principles, including strong customer orientation, management motivation and commitment, process performance and continuous improvement – taking into account risks and opportunities – ISO 9001 certification is an important recognition in Switzerland, which Tornos obtained in 1998. Recertifications are carried out every three years, and Tornos Switzerland once again proved its mastery of all procedures in all areas. This is part of a group-wide certification process, since Xi'an obtained the certification in 2018, and Taiwan is currently taking the necessary steps to obtain it.



All Tornos assembly activities in Switzerland now concentrated at Rue Industrielle 111 in Moutier

Tornos has long envisioned bringing all of its activities, including its assembly lines, under one roof. Following the sale of the building located at Rue de l'Ecluse 49, MultiSwiss assembly activities are now carried out at Rue Industrielle 111 in Moutier, Switzerland. Tornos is now in the process of finalizing a new stage in the rationalization of its various sites and buildings on the Moutier site. The integration of the MultiSwiss assembly line has meant rethinking how best to use the resources, including the currently available space.



Tornos takes a keen interest in the circular economy

Tornos' overhaul department delivered its first fully overhauled MultiDECO at the end of 2019, demonstrating the company's expertise in breathing new life into older machines and proposing appropriate solutions to meet customers' specific requirements. This is a business opportunity and Tornos' revision capacity is constantly increasing. Tornos' overhauled machines are sometimes real time capsules. The DECO 13, for example, has been widely praised by appreciative Tornos customers and many of these machines are still in use today. That is why Tornos Service presented a completely renovated DECO 13 at EMO Hannover 2019. The past and future are therefore closely intertwined in the Tornos universe, balancing more than 125 years of know-how with key emerging technologies: hyperconnected, intuitive and generational.

*Focusing on innovative solutions
that give customers a competitive edge*

Our 2020 strategy

Customers and their future requirements are at the heart of the Tornos 2020 strategy. In determining its 2020 strategy, Tornos redefined its vision, mission and values as a group, and adopted a new code of conduct. Development of the 2023 strategy is now underway.

The Tornos Group strategy takes into account the challenges that its customers face and will continue to face in markets that are becoming ever-more connected, globalized and competitive. Tornos wants to give its customers a competitive edge through innovative products and services.

The Tornos vision: ‘We keep you turning’

With true pioneering spirit, Tornos evolves and develops concepts to face the demands of tomorrow. Our vast expertise and our global approach enable us to turn innovation into products and services that provide a competitive edge for our customers.

The Tornos mission: sustainability and profitability for our customers

Our mission is to provide our customers with the best-in-class solutions and services essential to their sustainability and profitability.

Core values and code of conduct

Tornos Group’s corporate values program includes six core values to which all Tornos Group employees at all our sites should aspire.

- Agility
- Open-mindedness
- Daring
- Reliability
- Sharing
- Appreciate and enhance

As every year, Tornos in 2019 took part in various events, with the aim of fleshing out these values and communicating them appropriately to all Group employees. The Group also published the Tornos Code of Conduct, a set of guiding principles for each and every employee to follow in their daily work.

Strategic directions

Based on the major progress that the Tornos Group has made in recent years, Tornos has defined strategic directions for the years 2018 to 2020.

- Internationalize our business
- Strengthen our flexibility
- Grow through innovation
- Establish Tornos’ services as a differentiator
- Enhance operational excellence
- Deliver unique solutions for targeted market segments

Tornos has defined specific measures and measurable objectives for each strategic direction.



Internationalisation

Internationalize our business



Flexibility

Strengthen our flexibility



Innovation

Grow through innovation



Differentiation

Establish Tornos' services as a differentiator



Excellence

Enhance operational excellence



Segmentation

Deliver unique solutions for targeted market segments

We keep you turning

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