

# COMPLETE

Nr. 01/20

The complete machining magazine

PEOPLE | At the heart of the MILLTURN | Who is Hans Peter Wachs?

MACHINES | M80 MILLTURN | Unlimited variety

AUTOMATION & DIGITALISATION | Looking to the future

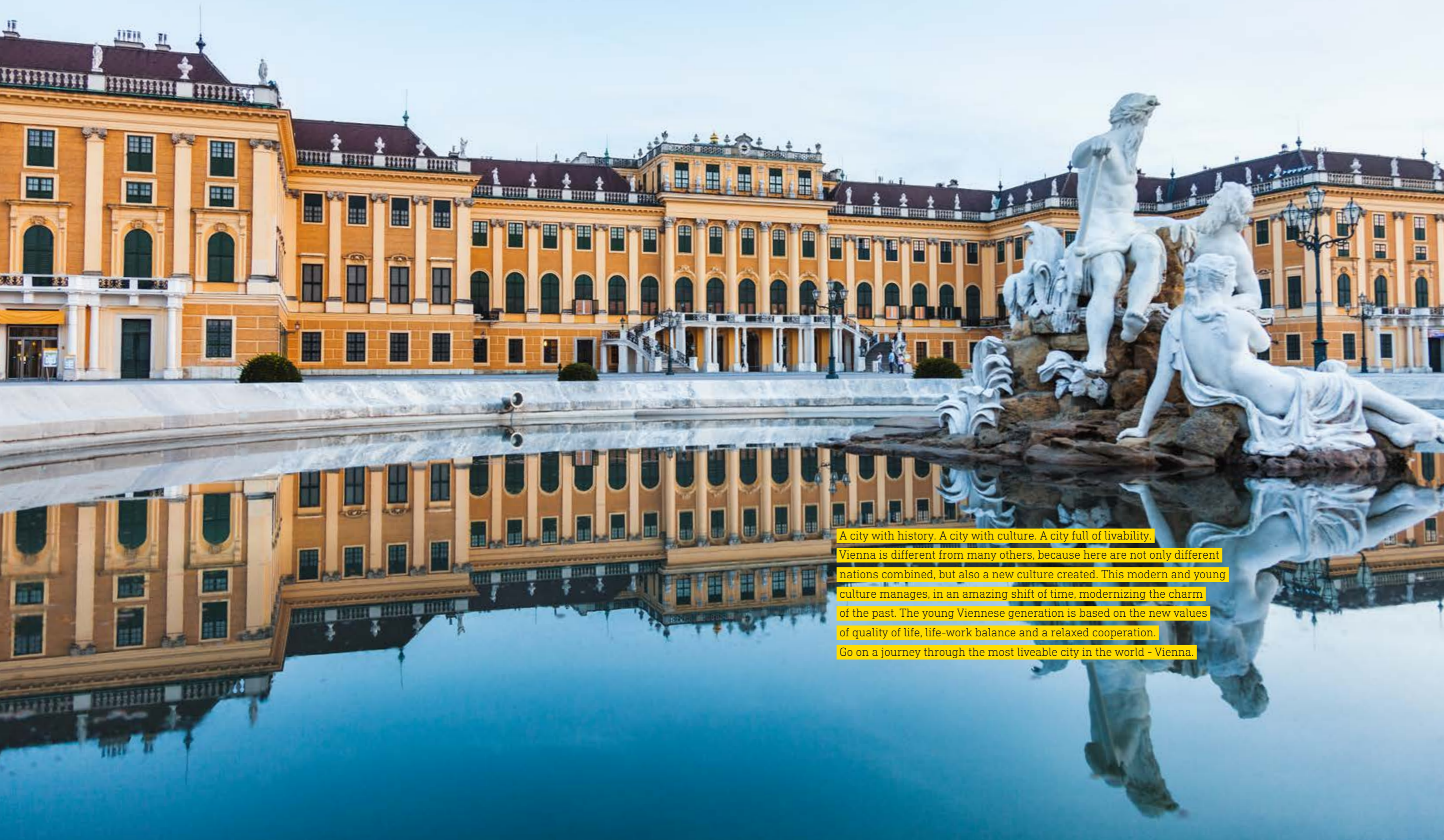
All eyes on:

# The MILLTURN advantage

Explore the unique MILLTURN advantage  
and your benefit of technological leadership  
of WFL



VIENNA. Now. Forever.



A city with history. A city with culture. A city full of livability. Vienna is different from many others, because here are not only different nations combined, but also a new culture created. This modern and young culture manages, in an amazing shift of time, modernizing the charm of the past. The young Viennese generation is based on the new values of quality of life, life-work balance and a relaxed cooperation. Go on a journey through the most liveable city in the world - Vienna.

"In times of change  
the greatest danger is  
to act with yesterday's logic."

Peter Drucker

## Dear customers and readers,

**"To be best in complete machining" – this is what we aim for. WFL is your partner for complex manufacturing tasks.**

We proudly present the fourth edition of our magazine "Complete – The complete machining magazine" and brand-new highlights regarding our company, machines and technologies. 2020 holds many highlights ranging from new machines to digital solutions.

**Machine innovations** – The focus is on the diverse range of machine models as well as technologies and possibilities. To be faster and more dynamic - this is our cornerstone and crucial for WFL's new machine model, which we already have been working on actively.

**Technology highlights** – We are experts in chipping of complex material and workpieces. Customised technological solutions are our answer to the high manufacturing requirements of the aerospace industry. Thanks to our employees' expertise, WFL is always able to find a manufacturing solution regardless of the requirements.

**Automation and digitalisation** – Our machines can be compared to supercomputing centres and allow for the connection of various components. Everything is perfectly compatible. This includes the integration of many different components, tools or robots which are equipped with sensors or monitoring tools which analyse and optimise processes in the background.

**Software** – A particular highlight, however, is the control of our MILLTURNS and the processes and programs related to it, which allow for most complex manufacturing applications. The MILLTURN software portfolio ensures an ideal and safe use of your machine.

With outstanding products from machines to software and from production solutions to customer services, we want to have a stronger presence in the markets, establish additional branches and look after national regions. Furthermore, we strive for the implementation of new technologies regarding our machines, processes and service.

Ihr WFL Management-Team



**Kenneth Sundberg**  
Managing Director After Market Sales

**Norbert Jungreithmayr**  
CEO

**Günther Mayr**  
Managing Director Sales and Technologies



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# The MILLTURN advantage

- Clamp once – machine complete
- Precision
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- Power
- Austrian Quality
- Speed
- Dynamics
- Highest productivity
- Innovation
- Ergonomics
- Complexity
- Accuracy
- Profitability
- Accommodation of long and heavy tools
- Multiple machining possibilities
- Optimised lead times
- Proficient partner
- Special stiffness
- Minimal repair effort
- Flexible concept for tool management
- Comfortable software functions
- Software for programming and simulation
- Integrated collision prevention
- Integrated sensors
- 60° grey cast iron slant bed
- Longevity
- Stability
- Cost-effective
- Modular machine concept
- Error detection (in-process measuring)
- Integrated cooling
- Reduction of rejects
- No tool set-up times
- No wait times
- Increased long-term planning
- Increased delivery schedule adherence
- 6-axis machining
- For small and medium batch sizes as well
- Useful automation solutions
- Automatic loading and unloading of the machine
- Production support by WFL
- Temperature stable turning boring milling unit
- B-axis enables machining for all angled operations
- Linear path measuring systems
- Superior performance and torque values
- Tremendous feed forces
- Good dampening
- Collision preventing concept
- Generously dimensioned linear guideways
- Extremely compact design of the slides



#### ACHIEVE THE GOALS THROUGH TEAMWORK

Thanks to close cooperation and a strong team, the heart of MILLTURN beats flawlessly. No new challenge is too big, because the team is able to handle every move. Here precision is passion.

# At the heart of the MILLTURN

## Precision Assembly

**H**ans Peter Wachs, supervisor and precision expert for the heart of the MILLTURN – the turning-boring-milling unit.

The turning-boring-milling unit ranks among the most important and complex components in every MILLTURN. Extremely precise procedures, continuous improvements and, above all, strongly unified teamwork are needed to be able to construct a product of this kind. Many individual actions, starting with machining the body and routing of the cables, all the way up to the test run of the turning-boring-milling unit (TBMU), are perfectly synchronized and subject to strict tolerance criteria. Hans Peter Wachs can best be described as the senior physician of this technical surgery and „operates“ on the most complex turning-boring-milling units every day with his 17-person team. In this edition of COMPLETE, Mr Wachs offers us some insights into his work and reveals what a typical day looks like in the operating room of the Precision Assembly.

**Mr Wachs, please tell us a bit about yourself and your career.**

I began my mechanical engineering apprenticeship back in 1980, when the

company was still VOEST-ALPINE Linz, which I successfully completed in 1984. Having finished my apprenticeship, I began to work as a mechanical engineer in the Machine Tool Assembly department of VOEST-ALPINE, later VOEST-ALPINE STEINEL. Pre-assembly had not yet been established at this time, which meant I had the opportunity to familiarise myself with various components. I then attended the vocational school for foremen from 1985 to 1987. It was during this time that I also started my first overseas deployments, including a project in China. From 1988 onwards, I was then assigned to the Precision Assembly department. I started work on the construction of the 15 kW turning-boring-milling unit here and, among other things, was also involved in the installation of the prototype of the 9 kW turning-boring-milling unit. From 1994 onwards, I then transitioned seamlessly to WFL Millturn Technologies GmbH & Co. KG, where I was also assigned to the Precision Assembly department. I continued working as a mechanical engineer in this department until 2018, handling all machine types from the 9 kW to the 80 kW turning-boring-milling unit (M200 MILLTURN). In 2018, I then assumed responsibility for the Precision Assembly 01

and 02 departments, as well as the Special Tools department. The new duties I have taken on now involve managing and coordinating these departments.

**Which position in the course of your career has had the greatest influence on you professionally?**

My overseas deployments have certainly had a big influence. Since neither EDP, mobile phones nor the Internet were around in the 1980s, it was pretty challenging as a young employee to find solutions again and again without the help of Dr. Google. However, this was really beneficial and helped me gain valuable experience. Constructing a large number of prototypes also helped me build on and extend my technical knowledge.

**What part does your specialist knowledge play in your current position?**

Since I am very familiar with the structure of the machines and their functions, it is easy for me to answer various questions and pass on my knowledge to the next generation. I have been able to build up my knowledge over many years of working in Assembly. This experience helps me reach certain decisions both quickly and easily in many cases.

**How do you organise your day-to-day duties and what is the most important in this regard?**

I turn on my PC early in the morning and check my e-mails. Since I have set up my workplace in the Precision Assembly 01 department, this is where I generally get started. I then also pay a visit to my two other departments, Precision Assembly 02 (PM 02) and Special Tools, where I also determine what needs to be done. Once I have done this, I distribute the tasks, work through orders and process/resolve issues.

**What are your favourite tasks and which do you enjoy less?**

I love getting to grips with new challenges. Working on prototypes or problems associated with mechanical systems are tasks that I really enjoy. I am less keen on so-called office work, although I understand that this is also an important part of my duties.

**What does teamwork mean for you?**

For me, teamwork means being able to ask questions at any time and then receiving both a useful answer and support. This not only strengthens team spirit, but also allows existing knowledge to be passed on to younger colleagues. This works really well in my departments, not least because my staff members are so committed.

**Where do you see your own personal strengths and weaknesses?**

It is always difficult to assess and detect your own strengths, as these are part of your personality. My strengths include analysing mechanical processes, as well as my solution-oriented approach. In terms of weaknesses, I would describe my pronounced sense of perfectionism or my very high expectations in terms of accuracy when performing complex and specific tasks as potential weak areas.

**How do you see yourself in terms of your character and skills? How would you describe yourself?**

I can best describe my character as calm, level-headed and humorous - aspects that are often beneficial in working life. I am able to achieve a lot with my patient, yet determined approach, particularly when solutions need to be found in stressful situations. To avoid mistakes, I place great emphasis on sustainable and



**COLLEAGUE COUNCIL**  
Solutions are found as a team.



»I can really rely on my staff, even when working under the kind of massive time pressure we often encounter.«

**STRUCTURE AND ORGANISATION**

Thanks to an accurate organisation the daily business runs smoothly.



**THE VIEW BEYOND THE DEPARTMENT**

The Precision Assembly from above.

foresighted approaches to work. My accuracy, which I already mentioned, really helps me in difficult situations where the objective is sometimes also to localise a fault or find solutions.

**What are you like when working with deadline pressure?**

I have now been working in this sector for almost 40 years, during which time I have experienced a lot of highly stressful situations with very pronounced deadline pressure. Based on my own experience, I can say that it is also important in situations like this to remain focused yet maintain a sense of calm to ensure that important decisions are not reached too hastily. Flexibility is also an important characteristic for meeting deadlines here. I should also say that I have an excellent team around me. Whether in PM 01, PM 02 or Special Tools, I can really

rely on my staff, even when working under the kind of massive time pressure we often encounter.

**What was your most difficult problem to date and how did you resolve it?**

Something that really sticks in my memory from my early years was the first time I flew to China, where my colleagues were already waiting for me on site. I was standing at the airport in Beijing with 120 kg of excess baggage (spare parts) in four suitcases and was unable to find a baggage cart anywhere. The ultimate solution to this issue was certainly not very gentleman-like, as I was forced to pinch the cart of a Chinese lady while she was not looking. When she then came up to me and asked what I was doing, I simply made out as though I could not understand what she was saying. After a few minutes, however, she understood my

problem and was friendly enough to let me keep her cart, so that I could transport all of my bags and suitcases. I should really express my sincere thanks once again at this point.

**What are your professional and personal goals? What would you like to have achieved in the next five or ten years? What position can you see yourself assuming?**

More than a year ago, I was given the opportunity to take over the business of my colleague Brandt Wilhelm. I think this will keep me busy over the next 5-10 years. I am looking forward to the professional challenges and making every effort to develop and grow together with the technology. However, the most important thing for me is to manage my department effectively, while also reinforcing and building on the reputation enjoyed by Pre-

**AN EYE FOR DETAILS**  
With a love for details,  
great things are created here.



cision Assembly through implementation of potential improvements. Another goal that I have in my personal life is to watch my grandchildren grow up and spend as much time as possible with them.

**How do you motivate yourself if you occasionally feel down?**

The truth is that I generally do not have enough time to feel down. After all, things can very quickly change for the better.

**What do you do to „recharge your batteries“ at the end of a stressful workday?**

The best way for me to recharge my batteries is to spend time with my family. If like me, however, you live in the country, taking a twenty minute walk in the natural surroundings often does the trick. I can then relax by working in our garden. Other things that help me balance the stress of day-to-day work include taking part in plays at the Katsdorf amateur dramatics society or riding my motorcycle.

**As a child, what did you want to be when you grew up?**

I actually never had a specific career in mind as a child. Yet I have always been fascinated with large construction and agricultural machinery. This interest was also one of the main reasons behind my decision to apply for a technical apprenticeship.

**What does the future hold? In your opinion, what would be ideal for WFL?**

One thing obviously worth striving for in the future is to maintain and also expand on the global leadership we enjoy in the field of complete machining centres. This is backed up by a company that has been putting in great effort for many years and boasts excellent employees that work towards this objective every single day.



**PROFILE**

Name: Hans Peter Wachs  
Age: 55 years  
Home town: Engerwitzdorf/OÖ  
Education, training and career:  
1971 - 1979 Primary and secondary school  
1977 - 1980 Polytechnic school  
1980 - 1984 Mechanical engineering apprenticeship  
1984 - 1994 VOEST-ALPINE STEINEL  
1985 - 1987 Vocational school for foremen  
1994 - present day: WFL Millturn Technologies GmbH & Co. KG



*All eyes on...*

# M80 MILLTURN

## Unlimited variety

by WFL Millturn Technologies

Modular system allowing for huge variant diversity, precision and quality.  
These are the features of the M80 MILLTURN – a flexible and customer-specific manufacturing solution thanks to WFL's biggest modular system.



All eyes on

# M80 MILLTURN

by WFL Millturn Technologies

## Highlights and advantages of the machine

### One million possibilities

WFL's modular system allows for huge variant diversity. The machine concept is based on minimised distances between work piece and tool to the slide rails and widest possible guideway distances. This results in ideal conditions regarding stability and geometries.

### A cut above the rest

The turning boring milling unit is the core module of the M80 MILLTURN. It is designed for heavy machining in terms of performance and dimensioning of the components. Well proven components such as the prismatic tool changer or the U-axis can be used on the M80 as well. Moreover, further machining units can be installed at an additional upper slide if required. All centre distances, except 1000mm, are also available in a counter spindle version. An additional tool turret can be offered for further productivity enhancement if required. Due to the innovative arrangement of the guide ways, there is no need for telescopic covers. This ensures a perfect chip flow. The minimum distance between steady rest slide and tailstock or two adjacent steady rest slides is merely 50mm. For this reason, many clamping situations can be realised much easier than in conventional machines. Steady rest slide and tailstock are equipped with NC-drives in the standard version already. They can therefore be positioned independently or simultaneously if necessary.

### Rigid, precise and flexible

The tool magazine is easily accessible from the front of the machine. It is especially compact, stable and almost maintenance-free. The high dynamic tool chang-

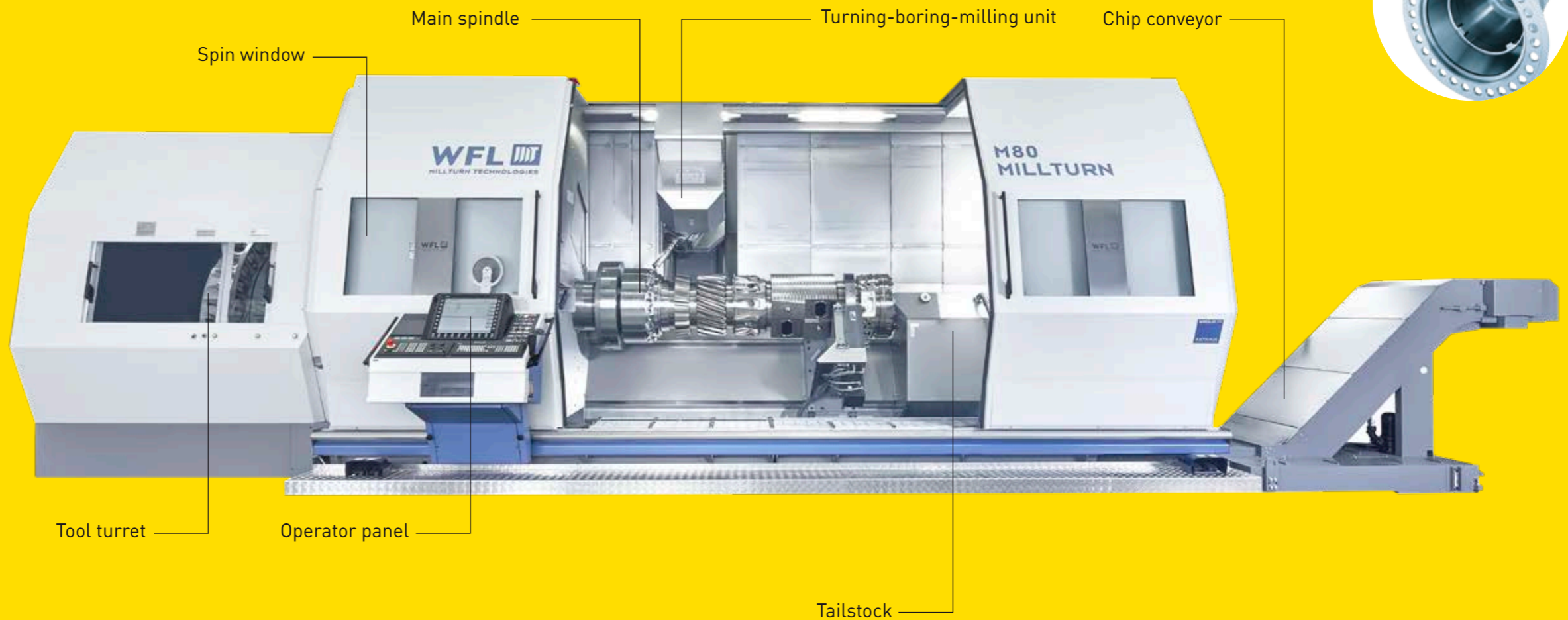
er is driven by a gear rack and has linear axes only. Even tools up to 35kg can be changed safely and quickly.

### Focus on technology know-how

The M80 MILLTURN has a virtually unlimited range of machining possibilities. It can be used for turning, boring and milling as well as other technologies such as circular milling, turnmilling, B axis turning, deep hole drilling, ID-turning, hobbing and many more boring and milling operations.

### Fields of application

The M80 MILLTURN provides best performance for suppliers in the aerospace industry as well as manufacturers of highly accurate and complex work pieces in industries such as mechanical engineering, engine manufacturing, energy technology and hydraulics. In fact, practically any geometric contour can be machined efficiently and with maximum precision by means of a MILLTURN.



AUTOMOTIVE - turbocharger



AEROSPACE - landing gear



AUTOMOTIVE - camshaft



AEROSPACE - Engine shaft

Technical data		M80 MILLTURN	M80-G MILLTURN
Nominal center distance	mm	1000 / 2000 / 3000 / 4500 / 6000	- / 2000 / 3000 / 4500 / 6000
Max. Turning- $\phi$ between centers	mm	1000/1000/1000/1000/980	-/1000 / 1000 / 1000 / 980
Max. power, Turning spindle 40% (100%) duty cycle	kW	56(40)/80(60)	56 (40) / 80 (60) // 60 (40) / 90 (60)
Max. torque, Turning spindle 40% (100%) duty cycle	Nm	3420(2440)/5860(4500)	3420 (2440) / 5860 (4500) // 3000 (2000)/ 4800 (3200)
Max. spindle speed, Turning spindle	min-1	2400/1600	2400/1600 // 2400/1600
Max. power, Milling spindle 40% (100%) duty cycle	kW	58(45)	58(45)
Max. torque, Milling spindle 40% (100%) duty cycle	Nm	640(500)/400(310)	640 (500) / 400 (310)
Max. spindle speed, Milling spindle	min-1	5000/8000	5000 / 8000



Peak Technology

# The spirit of innovation at its peak

Some fields, a small municipal road and a sign reading “Business Park Holzhausen”. Nothing suggests that we are about to find high-tech potential in this small town near to the airport in Linz. Peak Technology was founded in 2007 by Dieter Grebner. The company not only provides Formula 1, but also the aerospace industry with complex and ultra-light carbon fibre composites.

## COMMITTED TO PROGRESS

Peak Technology creates individual, flexible and highly innovative solutions that move from the first prototype to series production in record time. They search for the best solution in intensive work processes and work with foresight and the highest precision. Their greatest drive is the will to make it even more innovative and better.

**E**lectrification of aviation and autonomous flying planes are omnipresent topics at Peak Technology. 120 employees manufacture parts for the aircrafts of the future. Matthias Lechner, Managing Director Technics, talks about the company’s visionary projects. Peak Technology is already wondering how air mobility will look like in 10 or 20 years, but wants to fly even higher. They wrap high-pressure accumulators, fuse bodies and structure components with carbon fibres for aerospace projects. By contrast, their ultra-light high-pressure accumulators, which are capable of withstanding pressures up to 700 bars, seem to be more of a standard repertoire. Moreover, Peak’s portfolio comprises engine components for Formula 1 racing cars. Compared to all these science fiction projects, however, it seems as if we were talking about some parts of a simple steam engine. Despite their high-tech requirements, Peak Technology thinks of themselves as a manufacture because fibre composite technology involves lots of complex manual processes. The company combines traditional craftsmanship with high-tech manufacturing. Since 2019, Peak uses a M35-G MILLTURN by WFL for CNC manufacturing.

Peak decided to expand its ultramodern machinery in order to meet future requirements and improve CNC manufacturing. Before they bought the MILLTURN, the parts had to be machined separately on turning and milling machines. Matthias Lechner states, “We wanted to reduce loading and unloading

to an absolute minimum and simplify manufacturing planning. Furthermore, our customers have high demands on tolerances and we knew that we would have to opt for complete machining with as few clampings as possible to meet their requirements.” Finally, free form surfaces with tolerances of about 0.005 mm have to be maintained reliably. These specifications require air conditioning of the entire production area as well as high-quality measuring technology. The batch sizes of individual orders vary between 10 and 30 parts. “Our customers ask for just-in-time delivery. They don’t want to receive all parts at once. For this reason, even for “series” of 10 parts just one single part is being manufactured at a time each week. At the moment, we use the MILLTURN to manufacture 10 to 15 different parts and the number is rising daily.” explains Lechner. “At Peak Technology we process metallic materials such as titanium, high-strength steels and aluminium as well as carbon fibre components.” says Christian Brunner, Team Leader of the Machining Department. “This would be so much easier, if we only had a MILLTURN.” he is said to have sighed formerly when manufacturing complex parts.

The time had finally come when the company expanded in 2018. Matthias Lechner remembers, “We visited all competitors in the market in their factories. What we liked best about WFL’s MILLTURN was the slant bed construction and its massive cast-iron bed. To put it in other words: a very stiff machine. Eventually,

the proximity to WFL was important to us as well. We didn't want to work together with distributors as many other international companies do." Brunner and Lechner agree, "As we are using very small tools, a spindle speed of 16000 min-1 is crucial. The standard version with 12000 min-1 wasn't sufficient. Fortunately, WFL had already been testing a counter spindle version with 16000 min-1 for some time and one of their customers had successfully implemented one too. Speed in combination with high stability and precision is actually much more important to us than machining volume and power." Especially for components with very small radii, tiny ball cutters are applied. The parts are clamped in a three-jaw chuck with quick jaw change. A clamping system by Hainbuch, which is clamped in the power chuck, is currently used for testing. In some instances the work pieces are clamped internally by means of a clamping mandrel. If the work pieces are clamped in the chuck, the clamping pressures are freely programmable and can be adjusted in small steps during one clamping under NC control. There is no need to open the chuck when adjusting the pressure by programme. All of the above mentioned features are key for manufacturing thin-walled work pieces. "We're gaining more and more experience each and every day. Even though we do know a lot about 5-axis milling, we have to slowly approach the new possibilities that our MILLTURN shows us over and over again. It's a completely different dimension of complexity. We're continually milling in 5 axis on the MILLTURN. It works properly and delivers exact

results. We are highly satisfied and would soon like to use the MILLTURN not only for turning, boring and milling, but also for gear cutting." Lechner summarises the experience with the new machine.

Regarding software technology, however, there was a tough nut to crack for WFL beforehand: the zero point in the CAM system and the actual position in the machine should be compared automatically by means of Form Inspect by M&H. A probe measures the dimensions of the clamped raw part. By using a specific software solution, the machining zero point may thus be corrected according to the actual position of the raw part directly at the control. If the position or form of the raw part does not correspond to the CAD exactly, the ideal position is determined by means of a best-fit calculation and the coordinate system of the CNC programme is shifted or turned into the ideal position in order to reach a constant allowance of the entire raw part. This, in turn, ensures constant machining allowances and continuous cutting conditions throughout the entire machining process. WFL and M&H worked closely together in order to adjust the system. It was thoroughly tested by WFL afterwards and fully functional immediately after the delivery of the machine.

Peak uses the tool system Capto C6 in their MILLTURN. Stability was again the key factor. "We talked to different industry experts and realised that Capto totally meets our requirements", says Matthias Lechner about the precise analysis carried out previous to the investment. Tools are set by means



**WE'RE GAINING MORE EXPERIENCE EVERY DAY**

Dipl.-Ing. Matthias Lechner (Managing Director Technics) and Christian Brunner (Team Leader of the Machining Department) and „their“ MILLTURN



**DEDICATED**

Dipl.-Ing. Dieter Grebner, founder and CEO of Peak Technology

**INNOVATIVE**

Peak Technology is located in Holzhausen, Upper Austria. The company and its 120 highly qualified employees combine ground-breaking innovations regarding fibre composite lightweight structures with sound craft. Peak is the high-tech manufacturer of carbon components in lightweight construction.

»Our biggest motivation is that we are always willing to make it better and even more innovative.«

Dipl.-Ing. Dieter Grebner, founder and CEO Peak Technology

of a pre-setting device. The tool data is stored on a chip at the tool itself. When loading the tool into the machine, the data is automatically transferred to the control and stored in the tool management. Peak aims to leave all tools they need to process their orders in the machine. The current tool magazine of the M35-G MILLTURN comprises 120 tool stations and has thus even enough vacant positions for twin tools.

It's all about precision. And Peak is not prepared to compromise over that. The machine features glass scales in all linear axes. Even though the MILLTURN was within all tolerance values at acceptance, Peak still asked for more precision and WFL's experts made sure to tease out each and every µ.

Furthermore, the machine was equipped with a special ex-

traction system which serves to extract oil mist as well as the dust which is generated when machining carbon fibre components.

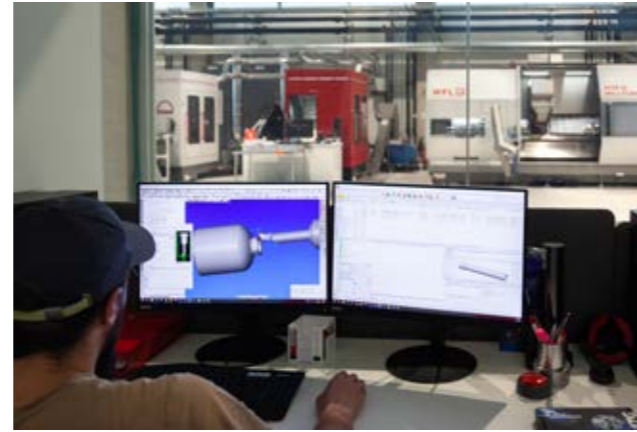
When it comes to connectivity, Peak is at the highest level too. All machines are connected to the ERP system and transmit running times as well as downtimes in real time. Moreover, Peak uses the IoT solution MindSphere by Siemens. It allows WFL to analyse sensor data such as the temperature of the milling unit upon Peak's request. WFL can thus react to potential future service requirements at an early stage.

Peak explicitly demands that all CNC machines should be programmable with CAM systems. Programming is carried out by means of the CAD/CAM system hyperMill. Complex parts re-



quire two or three days of programming effort, while simpler parts can be manufactured within a few hours. In addition, WFL's software solution CrashGuard Studio is used for various simulations previous to machining and in particular to simulate the transfer of the work piece to the counter spindle because this is not possible with CAD/CAM systems yet.

In order to protect the machine, valuable components and tools, Peaks uses WFL's anti-collision system CrashGuard. Peak's manufacturing experts declare unanimously: "CrashGuard is essential considering our requirements. The investment already pays off, if the software prevents a collision."



**MANUFACTURED IN A VERY SHORT TIME**

Each process step is already simulated during programming. Simpler parts can be manufactured within a few hours. Optimisation of manufacturing times comes second. It is of paramount importance that components can be manufactured and delivered within a very short time.



**EASY, STABLE AND PRECISE**

This applies practically to everything manufactured by Peak. The materials used are anything but ordinary and each part resembles an artwork.

*All eyes on...*

# Complete machining of spindles

by WFL Millturn Technologies

Thanks to decades of experience WFL is known as the leading technology provider in complete machining.

Thousands of machining problems solved evidence its unbeatable competence and the significant technological superiority. WFL develops tailor-made technologies and cycles to satisfy specific customer requirements. Any machining technology can be performed on a MILLTURN – from turning, boring, milling, deep-hole drilling to gearing, adjusting, grinding, deburring and many more.

And so can the complete machining of spindles.

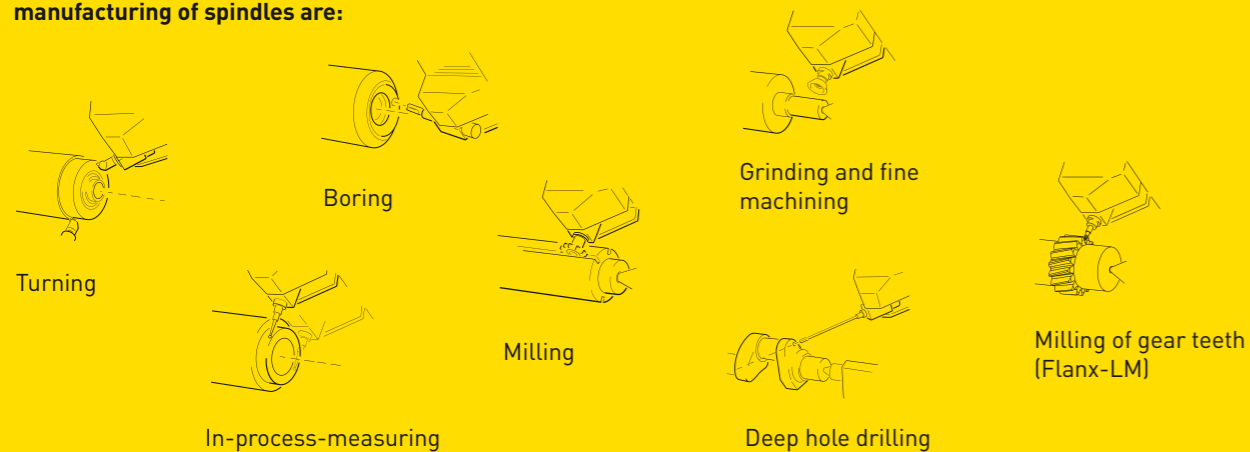


# Complete machining of spindles

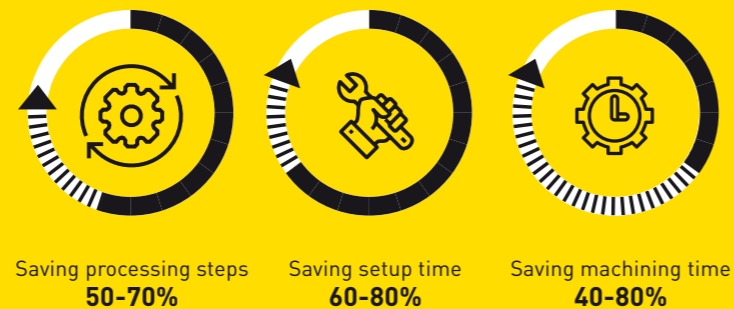
## The optimized process chain

Generally, WFL manufactures small as well as big spindles in very precise way on a MILLTURN. In the range of spindle manufacturing especially the machine models M30 MILLTURN to M50 MILLTURN are used. While in the course of the conventional process chain the machining operations turning, deep hole drilling, alignment, milling and deburring have to be carried out in individual operations one after the other, in complete machining in a MILLTURN this process takes place as a single machining operation. Thus, spindle machining in a MILLTURN is characterized by a process saving of 75%. (see diagram)

Typical technologies for the manufacturing of spindles are:



### Savings potential in the machining of spindles



### Advantages when manufacturing spindles on a MILLTURN:

- Clamp once - machine complete (including all turning, boring, deep hole drilling and gear cutting processes)
- Fully automated correction of run outs by integrated measurement
- There is no need for multiple clamping which leads to optimised geometric dimensioning and tolerancing
- Process monitoring by WFL iControl
- Automatic loading/unloading
- Optimised coolant supply and pumping process
- Precise results despite use of hard material
- No limit regarding part length
- Automatic tool change
- Highest accuracy & quality
- Balancing holes
- Perfect machine capacity
- Short lead times and set-up times
- Longevity while maintaining precision

**Flanx-Spline** is suitable for straight or helical shaping of external and internal gears. Conventional slotting tools are used here too, which can be larger, even usable together with prismatic tool holders. The graphically supported programming simplifies use and achieves the same level of quality as special gear shaping machines.



**Deep hole drilling, gun and ejector drilling** with high pressure or high volume coolant supply in axial, radial or inclined position. No need for clamping workpieces into various machines and thereby losing accuracy. Gun drilling with up to 80 bar (1100 psi) and ejector drilling with e.g. 400 l/min (106 gal/min) coolant supply. An important advantage especially for deep hole drilling is the comparatively high performances, torques and feed forces of the drives at 100% duty cycle.

**Gear hobbing, i.e. Flanx-Hob**, is used for straight and helical external gears (cylindrical or crowned). In addition, Flanx-Hob comes with "radius end", "conical" and "variable feed" special solutions. Flanx-Hob uses conventional gear hobs - either solid HSS or carbide cutters or with indexable inserted concepts.

Conventional process chain	Complete machining MILLTURN
OP 10 Turning OP 20 Turning OP 30 Deep hole drilling OP 40 Adjusting OP 50 Milling OP 60 Milling OP 70 Turning OP 80 Turning OP 90 Deep hole drilling OP 100 Deburring	<b>OP 10 Complete machining</b>
OP 110 Heat treatment OP 120 Grinding	
<b>75 % Savings</b>	



*We love...*

# ...Vienna

Schönbrunn Castle, Belvedere Palace, Hofburg Palace, St. Stephen's Cathedral. These wonderful attractions are famous and loved throughout the world. As locations steeped in history, they are highlights for anyone visiting the city. Strolling around these ancient buildings, it is easy to forget that times have also moved on in Vienna and new life has been breathed into the city.



**TRADITION NO MATTER  
WHERE ONE LOOKS**

Vienna. A city where history is lived  
but a „breath of fresh air“ is coming.



#### TRADITIONS

Whether modern or classic, the coffee house culture remains



#### FROM ABOVE

Stephansplatz with the world-famous St. Stephen's Cathedral



**UP IN THE AIR**  
The landmark big wheel of the Vienna Prater

#### FACTS

Capital of Austria  
Population: 1,889,000  
Size: 414,87 km<sup>2</sup>  
Districts: 23

**W**hen the first rays of sunshine hit the Austrian capital and the city slowly starts to wake up, the animals at Schönbrunn Zoo are being fed, the display items are being prepared at Belvedere Palace and the Imperial Silver Collection at Hofburg Palace is being polished. Vienna's classic culture can be felt throughout the city, with glimpses often coming from the most unexpected corners. The coffee house culture and directness of the old Viennese are always a highlight for visitors. Vienna's young cultural development picks up on these typical characteristics to create an inspiring new world. While marvelling at the city's history, you shouldn't disparage the new and young Vienna. After all, it elevates the beauty and cosmopolitan attitude of the city to new heights.

#### MuseumsQuartier

The place where the new generation really comes together with the classic world is the MuseumsQuartier (MQ). Anyone passionate about art can quench their thirst by visiting the mumok - Museum of Modern Art - or the Leopold Museum with the world's largest Schiele collection, as well as the Vienna Kunsthalle or Architekturzentrum. Just opposite the MQ, performing arts, music and nightlife

all come together in the Rote Bar in the Volkstheater. During both the „Summer in the MQ“ and „Winter in the MQ“ events the courtyards of the popular Vienna MuseumsQuartier become home to concerts, lighting installations, readings and much more. Yet this breath of fresh air extends beyond the culture and art scene.

#### The city beach along the Danube

For many years, Vienna did not have a particularly intimate relationship with the Danube Canal - a small tributary of the Danube that flows directly past the city centre, with its quays reserved for pedestrians and cyclists.

However, this relationship has seen quite a change over the course of the last few years. With a host of new venues along its banks, the Danube Canal has developed into one of the most exciting and attractive locations in the city, especially in summer. Modern bars, restaurants and ever changing pop-up eateries, combined with Otto Wagner's over 100-year-old Schützenhaus bring the old and new together. The Badeschiff is the perfect place for a swim on hot summer days, as well as for a game of curling in winter. It is the hotspot for locals and an absolute insider tip for anyone visiting the city. The perfect place not only to observe, but also experience Viennese culture. However, the fo-

cus is not only on new locations, as new life is also being breathed into old traditions.

#### The old and new Karmelitermarkt

The Karmelitermarkt, established in 1671, is one of the oldest markets that continues to be held in Vienna to this day. Boasting 80 market stalls and welcoming some 7,500 visitors per week, it is one of the top tips for those looking to enjoy Vienna's markets. The Karmelitermarkt sits at the heart of an old, formerly Jewish district on the other side of the Danube Canal. Located just a few minutes from the city centre on foot, many of the former market stalls have been turned into exciting new eateries. It is definitely worth paying a visit to the farmer's market and the stalls of the slow food movement on Fridays and Saturdays. Culinary hotspots as far as the eye can see - alongside international speciality cheeses and meats, visitors can also buy ripe fruit, crisp vegetables and a whole host of tasty organic delicacies such as salted and smoked meat, as well as various dairy products. Following a balanced breakfast, you should also take the opportunity to pay a visit to the Vienna Crime Museum. Quirky insights into rather sinister crimes, and the sometimes equally gruesome methods of punishment handed

out over several centuries, offer visitors an idea of what it must have been like to live in eras gone by.

#### Snacks and culture at the Naschmarkt

Over 100 market stalls, restaurants and bars offer fresh food and specialities between the Kettenbrücke and Karlsplatz. As the sellers are so passionate about their produce, you can enjoy samples of almost everything on offer and then purchase your favourites to take home with you. Get a feel for different countries and cultures and enjoy a culinary world tour right in the heart of Vienna! For those who have built up an appetite after enjoying all the art, Café Anzengruber has been an institution for many years, while Café Vollpension with its homemade cakes is the ideal address for stylish „grandma kitsch“ in the Art Gallery District. The Albertina modern is due to open at the Künstlerhaus on Karlsplatz in March 2020. The new Vienna Museum of Contemporary Art showcases the extensive collection of contemporary art from the Albertina in various exhibitions. The „Stadtkino“ cinema, also located in the Künstlerhaus, is another good recommendation. The Stadtkino - Vienna's only municipal cinema - has been showing unmistakable national and international highlights from the film scene since 1981.

#### „Roll up, ladies and gentlemen!“

Last but not least, every visitor should take time to see the Vienna Prater with its unmistakable landmark the Riesenrad - the big wheel, famous not only due to Carol Reed's classic film „The Third Man“. The theme park in which it is located is steeped in tradition and remains just as popular today as ever. History buffs can learn all about this popular park in the Prater Museum where you can completely immerse yourselves in bygone times and feel like a child again when enjoying the old fortune telling machines, legendary ventriloquist's dummy Maxi and many other attractions.

This old and stereotypical Vienna meets a new and young culture here with a vibrant bar and club scene that has developed around the Prater. It is the place where young and old meet to relax and have fun. Whether experimental electronic music and techno, through garage and industrial, all the way up to indie rock - everyone is sure to find something they like. Young Vienna really has something for everybody, no matter whether you enjoy a relaxing end to the evening or dancing through the night to your favourite music. It is now down to you to plan your next trip to Vienna, combining the classic with the modern!



#### EDITOR'S TIPS:

##### Museums Quarter

Museumsplatz 1, 1070 Vienna  
www.mqw.at

##### Danube Canal

Franz-Josefs-Kai, 1020 Vienna

##### Volkstheater and Die Rote Bar

Philharmoniker Str. 4, 1010 Vienna

##### Naschmarkt

1060 Vienna

##### Café Anzengruber

Schleifmühlgasse 19, 1040 Vienna

##### Café Vollpension

Schleifmühlgasse 16, 1040 Vienna

##### Stadtkino

Akademiestr. 13, 1010 Vienna

##### Prater Museum

1020 Vienna, Oswald-Thomas-Platz 1 (by the big wheel), www.prater.at

##### Crime Museum

Große Spertlgasse 24, 1020 Vienna  
www.kriminalmuseum.at  
www.wien.info



All eyes on

# CONTROL 2.0

## Operator panels with many new features

### New standards in terms of design and performance

One of the most important elements of a MILLTURN has now been given a new look. However, not only has the appearance been updated, but also the internal components. One of the many aspects that determine the performance of machining centres is the potential of the control system. The IPC 477E Industrial Flat Panels are ideally suited for use as industrial monitors and boast fast response times for instantaneous screen updates. The MILLTURNs now come with control systems featuring an innovative multi-touchscreen version with 24-inch widescreen front panel in 16:9 format, as well as full HD resolution (1920 x 1080).

Another special characteristic is the fact that the display can be divided and various programmes can be displayed on multiple sub-sites. This allows functions such as iControl process monitoring, graphics, programs, statistics and real-time data to be displayed in parallel. All of this results in more effective work. The CrashGuard, CrashGuard Studio and Millturn PRO programs can be displayed in the header bar in a clearly structured way. The window below this is used to display information on axis loads, tools, the CrashGuard Viewer, axis movements in real time and much more. This provides operators with a large number of options for monitoring their manufacturing process.

### The following new features can be offered:

- 1x 24" multi-touchscreen display (1920x1080)
- 1x i5-6442EQ processor
- Windows 10 IoT and on top
- 240 GB SSD

- 24" multi-touchscreen display (1920x1080 resolution)
- Slim, modern design
- i5-6442EQ processor
- Windows 10 IoT
- 240 GB SSD
- Height-adjustable (220 mm)
- 15° tilt angle adjustment
- 105° swivel
- Additional options (additional display, control unit, etc.)
- External printer

The ergonomic solutions are also perfectly implemented in the new operator panel and offer operators many benefits. The more streamlined overall design means that the panel can be rotated 105 degrees around the vertical axis and the angle can be adjusted by 15 degrees. Space is also provided for special equipment such as displays or control units. The new operator panel is not only faster, but also more ergonomic, modern and clearly laid out. Moreover, it is rotatable and adjustable in height and therefore provides even better ergonomics. These attributes ensure the best working conditions for operators.



Operator panel with 15° swivel range (M30/M35 MILLTURN)



Operator panel can be swivelled around the vertical axis (105°) (as of M40 MILLTURN)



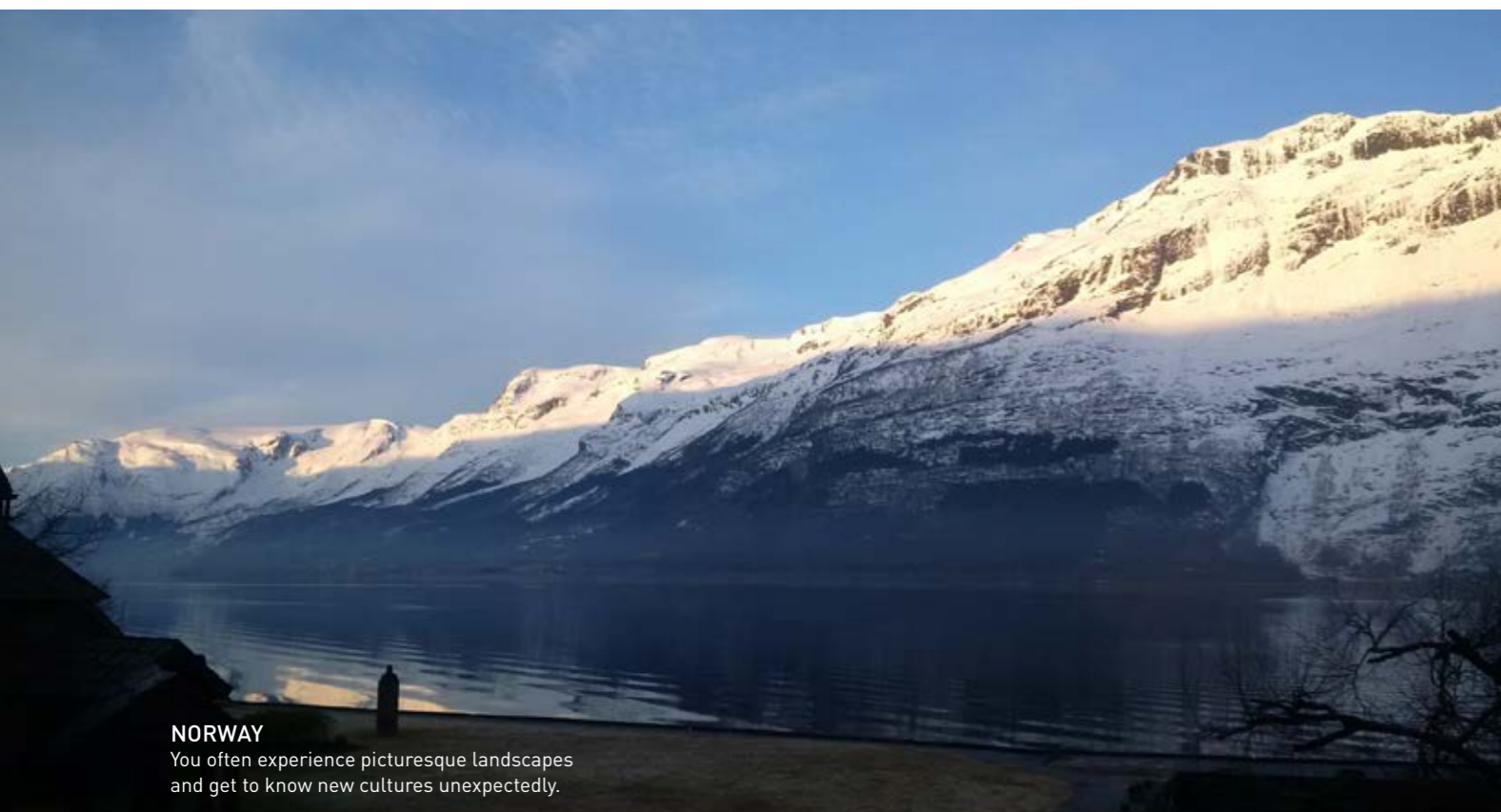
Operator panel with 220 mm height adjustment (as of M40 MILLTURN)



Operator panel with various additional options

# No distance is too far for us

Interview with Stefan Diesenreither, Service technician at WFL



**NORWAY**  
You often experience picturesque landscapes and get to know new cultures unexpectedly.

Always ready to go and fully equipped to solve any problem: the service engineers of WFL. The key skills required in Customer Services are not only an extensive knowledge of MILLTURN machines, but also solution-oriented thinking and a pragmatic approach. Stefan Diesenreither, who has been a service engineer at WFL since 2012, explains what a typical job looks like, what really matters and the kind of challenges that need to be overcome.



**LEARNING AND TEACHING**  
Sharing knowledge and learning new things is the motivation.

»We might arrive at work early in the morning and then have to take a flight to Malaysia that same afternoon.«

**When and how did you start your career at WFL?**

I began in August 2011. At first, my position was only ever intended to be a transitional solution. I worked at first in the Assembly, Pre-Assembly and Final Assembly departments. I then discovered that WFL also has a Service department and that the staff in this department travel around the globe. I was immediately fascinated by this, as I have always been excited by the idea of getting to know different countries, cultures and people. As such, I immediately applied for a position in the Service department and have now been working there since October 2012. My first year essentially comprised a detailed training phase. During this time, everyone works their way through Main Assembly and Commissioning, also receiving general training on control systems. This offers a perfect overview of the entire assembly process of a MILLTURN. Once I had completed this, I was already allowed to take my first business trip. My

initial deployments were in Austria, Germany and Switzerland. The key here was to implement what I had learned in practice and to build on my specialist knowledge. The better you become, the further you are allowed to travel away from Linz. After two or three years, I was then finally sent out on global deployments.

**What exactly does a typical service job look like?**

This varies, depending on the job at hand. There are scheduled service jobs for which we generally know what to expect a long time in advance and then there are short-notice jobs. With the latter, we might arrive at work early in the morning and then have to take a flight to Malaysia that same afternoon. In terms of the workflow, the hotline is the first port of call for customers and the staff note down all the details: what needs to be done on the machine? As a service engineer, you then prepare yourself to work on the affected assemblies. You get hold of the

corresponding plans, as well as special tools etc. As soon as the travel booking has been made, you are then ready to go.

**So you always have your personal suitcase ready to go?**

Exactly. The suitcase is always packed and ready for short-notice jobs.

**How do you then proceed once you have arrived on the customer's premises?**

After going through the sometimes lengthy and sometimes more straight-forward safety briefing, the contact person responsible then takes you to the actual machine. The customer then confirms what has been done on the machine. It is always important to question here whether the problem has been present for some time and how it started. After all, quite a few jobs – I would say around 10% – end up actually being a technological problem rather than a mechanical issue. Errors can easily occur when writing software, which then lead





to vibrations or inaccuracies in terms of tolerances. When a problem occurs, it is often difficult for customers to determine what has ultimately caused it. It is therefore extremely important first of all to ask specific questions and gain a good overall picture of the situation. This makes it easier to select a suitable approach and get right to the heart of the issue. Steel is not just hard and cold, but also ductile and malleable. The material has its own dynamics, as even slight temperature differences caused by friction or similar during machining have a massive influence on the overall machining result. These things are the daily bread for service engineers like us. We always need to consider them.

**What different types of service deployments are there?**

The issues addressed during deployments range from sporadic problems such as vibrations, standstills, broken spindle bearings, overloaded axes and so

on, through technical assistance, all the way up to retrofitting work. Regular deployments are always associated with the aforementioned sporadic problems. After all, service engineers can only accurately determine the issue once on site. This is done by checking the mechanical components, the programs, and compensation values to determine whether they are all correct. When providing technical assistance, we make ourselves available to the customer should problems or questions arise. A deployment of this kind can last three months or longer, depending on the complexity. This service is ordered separately. When performing retrofit work, the first thing we do is perform a full survey of the customer's machine. We then order the parts and have them delivered to the customer. Although machines of this kind (typically over 20 years old) are still working, they are often in a condition that needs overhauling. All main components such as the turning-boring-milling unit, linear guide ways, main drive, tool

changer, systems and so on, are replaced to improve the overall condition of the machine. A deployment of this kind takes between 6 and 8 weeks, sometimes even 10. It all depends on the size of the machine and the amount of time and effort required. During one deployment in Canada, for example, the only thing left over from the original machine was the shell, as everything else was completely replaced. This was certainly one of the most challenging jobs. Our motto in Service is: once you head out for a job, you do not leave until the work has been completed and the problem 100% fixed.

**What resources are used?**

We use special equipment such as clamping force measuring devices, endoscopes, lasers for straightness testing, and also things like digital measuring equipment for checking geometry and so forth. But as a general rule, the machine's control system is the best test instrument, as it allows you to filter out all other problems.

If you know what you are doing with the control system, you have already won half the battle.

**Do you also offer brief training once you have completed the repair work? If so, how does this work?**

Customers very often come to us and ask what they can do to ensure that their machine still has a long life cycle ahead of it. Of course, the top priority here is to keep the machine clean and ensure that all annual maintenance work is performed as stipulated in the operation manual.

**What difficulties do you experience when performing service work?**

When you are in countries such as China, India or Russia, the first hurdle is the language. This often makes it more difficult to provide customers with clear instructions. If you are the first one on the scene, for example following a machine collision, you can often find yourself in the firing line of criticism. In situations like these, the most important thing is to stay calm and not take things personally. Although you are clearly always dealing with problems, it is a great feeling if you can sort out the issues and then end the job on a positive note.

**Do you also regularly chat with colleagues from the Service or Technology departments while you are out on service deployments?**

Yes, that happens. For example if you are confronted with software problems or need to request plans so that you can complete the necessary work. You generally get in touch with the Service Hotline in situations like this. The office staff then provide the necessary documentation, so that the work can be performed as effectively and smoothly as possible. The flow of information at WFL is always excellent in this regard.

**How would you describe the ideal service deployment?**

For an ideal service deployment, you should already know the problem in advance. This allows you to prepare yourself accordingly and you do not need to first localise the issue. You know exactly what needs to be done. Unfortunately, this does not happen very often. The simplest job I ever had was to replace an S1 motor. I already knew where the problem was, what to expect and how I needed to proceed.

**What has changed since you first started going out on service deployments?**

One new thing is our S.A.M app (Service - Application - Manager). When you are on site with the customer, this can be used to scan a QR code and determine which spare parts are required. Travel expenses are also recorded using the app. When a job is complete, the receipts are automatically sent to our office. The office can then draw up the invoice promptly and does not have to physically wait for the documents to see what has been booked.

**Are there any service deployments that really stick in your mind?**

The extremely strict and time-consuming security searches encountered in certain countries always stick in my memory. Otherwise, I found Norway particularly impressive. These have always been good trips in terms of how smoothly everything has gone on the ground. The customers have also always been attentive and keen to learn. It is fair to say that I am really fascinated by Norway, its culture, its people and its landscape.

**You have also been involved in service training since 2019. What tasks do you currently perform here?**

I am responsible for training our overseas service engineers. My colleague Bruno K. looks after the Austrian engineers. I also occasionally help out with customer training sessions if we are short on staff.

**What does this kind of training involve?**

It starts with evaluating the current level of knowledge of the respective engineers. I then compile the training programme on this basis. This is very well received by our colleagues, as we can focus on the topics where further knowledge is required. The fact that we typically provide one-to-one training is also beneficial, as this obviously offers the best possible learning outcomes. This concept really works well. The training typically takes between 4 and 6 weeks.

**How would you describe the Service department at WFL?**

The Service department at WFL excels in particular through its response times. We are able to perform repairs particularly quickly for all components in the machine, not just for individual assemblies. Our customers really appreciate this.



**ALWAYS READY**  
As a service technician you are always ready for the next adventure.



All eyes on

# IC0tronic – Intelligent, precise and secure

by WFL Millturn Technologies

The intelligent tool IC0tronic offers data security, interference-free communication and, above all, process optimisation in your Industry 4.0 production operations.

Similar to a receptor cell in the human body that senses various external influences, the IC0tronic tool from WFL also picks up on the slightest of stimuli. Incorporating real-time data communication and integrating sensors in the tool accommodation not only optimises milling processes, but also increases the productivity of the machine. Direct communication between machine and tool significantly simplifies the workflow, while at

the same time reducing associated costs and downtimes. From process monitoring and parameter optimisation, all the way up to real-time control of speed and feed rates, all data can also be visualised and processed accordingly via the machine control system. Impressively high process stability and data security, whereby the data is only saved on the machine, round off this overall package. A large number of options and scope for optimised processes are now on offer with the IC0tronic tool.

- Autonomous process optimisation
- Real-time capable data communication
- Optimised milling processes
- Increased productivity
- Reduced costs
- Tools can be used for longer
- Direct communication from machine to tool
- Reduced downtimes
- Data security (process data is only stored on the machine)
- Process stability
- Wireless digital data transfer
- OPC UA communication-enabled

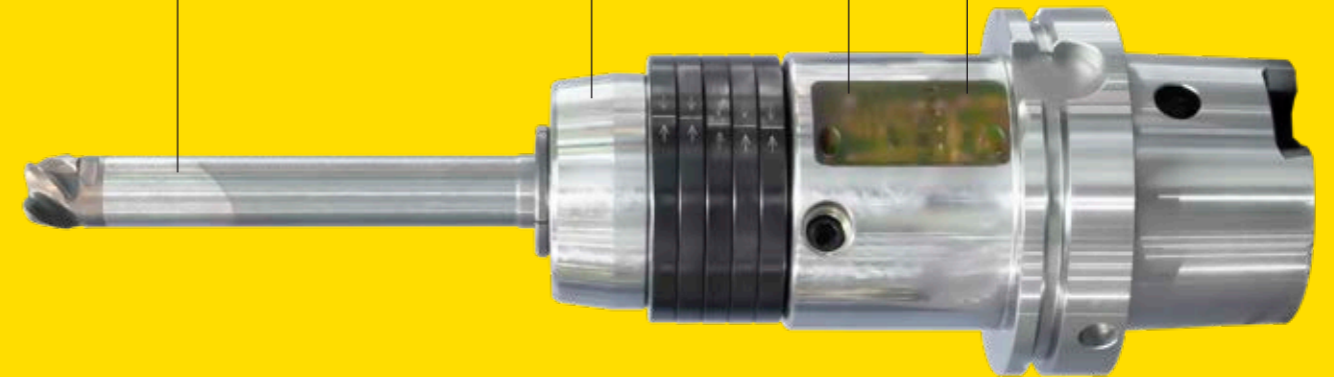


**Optimized milling process**  
Tools can be used longer and the downtime is shortened

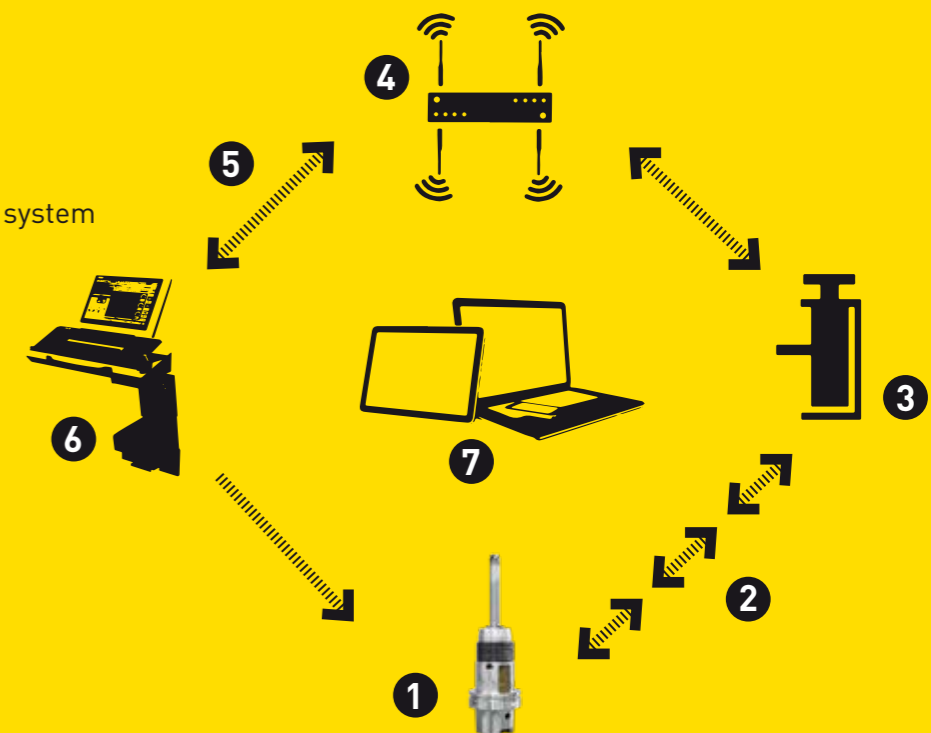
**Autonomous process optimization**  
Productivity increases and costs are reduced.

**Data security**  
Process data is only saved on the machine.

**Wireless digital data transmission**  
Direct communication between machine and tool (OPC UA communication-capable)



1. IC0tronic
2. Digital wireless data transfer
3. Communication module
4. Control unit
5. Real-time communication
6. Operator panel / machine control system
7. Process monitoring (OPC UA communication-enabled)



# Looking to the future

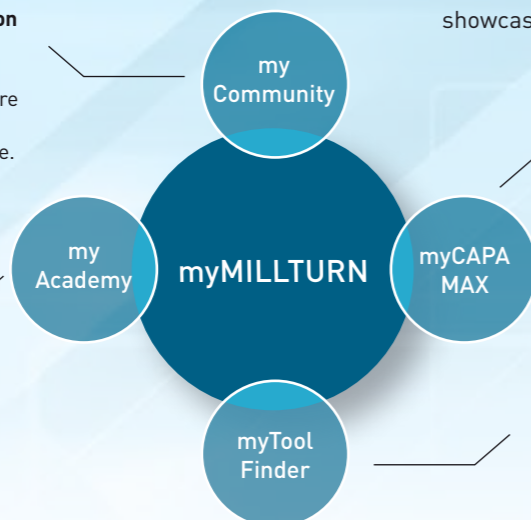
In a world in which digitisation and automation continue to gain ground, WFL also recognises clear benefits. WFL sees in the current development trends an opportunity to establish partnerships and grow together. The company is now breaking new ground to grant its customers greater insights and diversify its offering.

Oscar Wilde once said, „progress is the realisation of ideas“. At WFL, we work tirelessly on making our ideas a reality. From January 2020, these ideas can now also be experienced first-hand at the new Millturn Innovation Center in Linz. Three machines with top equipment, one M30-G MILLTURN with automation, one M50-G MILLTURN and one M80X MILLTURN, now form part of the new exhibition area at the Millturn Innovation Center Linz. Alongside the new equipment, an excellent range of services is also on offer with training, customer seminars and development projects. The showroom at our branch in Wixom, which has been up and running since 2015, has now also been modernised and extended. Two new MILLTURNs, one M35 MILLTURN and one M50 MILLTURN, have been on site since October 2019. Alongside the machines, emphasis was also placed on improved equipment.



**WFL Community – Communication exchange and networking**  
Industry experts and MILLTURN users have the opportunity to share their experiences, get useful tips and chat about new functions here.

**WFL Academy – Increase your knowledge and become a MILLTURN expert**  
The WFL Academy not only offers the opportunity to book training sessions and courses for MILLTURN operators, but also the latest webinars and online seminars.



**WFL CAPA MAX – Maximise machine utilisation**  
Maximum productivity by achieving the highest degree of utilisation.

**WFL ToolFinder – Find your perfect tooling solutions**  
When using the WFL ToolFinder, you can find the perfect tools for your needs or discuss your requirements with an expert in just a few steps.

## myMILLTURN

However, the new Innovation Center is not the only place showcasing advances and innovation. WFL's top priority is to ensure that customers are always kept up-to-date with the latest technological developments. This involves building on and expanding areas of expertise based on new developments and simplifying workflows thanks to improved production planning. All of this and more is now being brought together and showcased in a unique platform: myMILLTURN



## WFL Academy

We will be devoting a particular focus to the topic of knowledge transfer and training in the near future. „To guarantee optimum usage of the MILLTURN, it is essential to offer our customers the best training courses. This is why we place so much emphasis on training our own employees,“ comments Kenneth Sundberg, Managing Director After Market Sales.

With the new WFL Academy, the company is massively expanding its training options. Alongside a broader, more diversified training offer and a fixed training calendar, there will also be the option to learn about the latest technologies in webinars and online seminars. myMILLTURN is scheduled for launch in autumn 2020.

## Sandvik Coromant cooperation

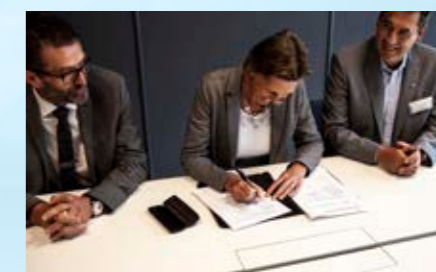
**Sandvik Coromant is the global market leader in the field of cutting tools and metalworking solutions.**

WFL has been collaborating with Sandvik Coromant very successfully in the field of vibration damped boring bars for many years. Kenneth Sundberg (Managing Director After Market Sales) and Reinhard Koll (Head of Application Engineering) visited the HQ of Sandvik Coromant in Sandviken, Sweden from August 12-13 and signed a strategic agreement for intensified cooperation.

The key focuses for the cooperation were discussed and defined with Sandvik Coromant President Nadine Crauwels and several of her closest employees. Mr Heiko Hornung, based in Germany, has been appointed as Strategic Account Manager for WFL. Together with the Sandvik sales office for WFL in Austria, he will work closely with us.

This strategic cooperation involves projects and activities in the areas of research and development, as well as sales and marketing, led by a team from both parties that gets together at least twice a year. Special attention is paid to tool solutions for turn key projects and vibration damping boring bars. We are delighted to enter into this deeper cooperation, which offers WFL forward-looking and more extensive opportunities.

Photo below: From left to right: Mr Heiko Hornung (Strategic Customer Manager), Kenneth Sundberg (Managing Director After Market Sales), Mrs Nadine Crauwels (President Sandvik Coromant), Mr Damian Göppert (Senior Manager Strategic Relations), Reinhard Koll (Head of Application Technology WFL), Chris Mills (Head of Product Unit Industry & Machine Solution Dev)



President Nadine Crauwels signs the partnership agreement and looks forward to an innovative future together with Kenneth Sundberg (Managing Director After Market Sales)



# Closer than you think

WFL is located all over the world



## Events

10.-13.03.2020	METAV Düsseldorf	12.-15.05.2020	ELMIA Jönköping
19.-22.03.2020	Eskişehir Endüstri Fuarı	13.-17.05.2020	ILA Berlin
31.03.-03.04.2020	Industrie Paris	25.-29.05.2020	Metallrobotka Moscow
31.03.-04.04.2020	Simtos Seoul	25.-29.05.2020	BIEMH Bilbao
06.-08.04.2020	ADSS Seattle	02.-05.06.2020	ITM Poznan
20.-24.04.2020	MACH Birmingham	20.-24.07.2020	FARNBOROUGH Farnborough
05.-08.05.2020	MACH-Tech Budapest	14.-19.09.2020	IMTS Chicago
12.-15.05.2020	Metal Show Bukarest	15.-19.09.2020	AMB Stuttgart



## Focal Point: Beijing



**Our customers are located all over the world. However, the next WFL Millturn Technologies branch or agency is closer than you think and a reliable partnership is therefore guaranteed. So search for your agent and get in touch with us!**

With its 50 distributors from several countries and 7 branches world-wide, WFL is a global company with extensive resources. In each edition of our COMPLETE magazine we present one of our branches, because we want you to get to know WFL better. For this reason, we talk to our respective branch managers about relevant topics.

They pull the team together, organise daily business and coordinate the service calls. Thanks to this stable working environment, we can always rely on our often long-standing employees and the Chinese market maintains its excellent reputation with its multiple MILLTURNS.

### Who should opt for a MILLTURN?

The Chinese market is really special because the state-owned companies control a big part of the market. These companies have been seriously affected by product shortages for several years. The optimisation potential is therefore very high – the perfect market for a

## WFL BRANCH BEIJING, CHINA Interview with Ph.D. Li Feng



### What makes WFL what it is?

WFL not only created the MILLTURN. WFL created complete machining and has therefore special technical advantages compared to other manufacturers. Technological diversity is the key. For this reason, WFL is the best choice, if you want to manufacture complex parts in high quality with the highest possible flexibility. I'm convinced that a MILLTURN is indispensable for manufacturers of complex parts striving for market leadership, because there is nothing similar to this compact package of precision, power, profitability and efficiency.

### What is special about your team?

Our main goal is to provide the best possible service for prospective and existing customers. Therefore, an open and transparent internal communication as well as an intense cooperation with the headquarter is crucial for the team in Beijing. This philosophy creates a strong team which is able to cope with major challenges together. Our office managers are of major importance for us as well.

MILLTURN. However, WFL's machines are of great interest for private companies as well. Who wants to grow and strengthen their own position in the market requires the best machines and technologies. Companies, which already have one or many MILLTURNS at other production sites, reach out to us quite often because they want to expand in China.

### Tell us something about you!

I have already been interested in engineering for a very long time. After I finished school, I chose to pursue a degree in a mechanical and technical discipline at the Tsinghua University. When I started working at WFL in China in 2005, I had already gained 13 years of experience in the tool industry. I was fascinated by the quality and flexibility of WFL's complete machining as well as the associated possibilities for production. And it never ceased to inspire me over the years. This very fascination animates the whole team – especially when implementing complex projects. It creates a special working atmosphere because everybody wants to give their very best and is passionate about their tasks.

## » QUESTIONS | COMMENTS | IDEAS?

You have questions regarding our products, technologies or machining? We are looking forward to your mail at [office@wfl.at](mailto:office@wfl.at)

## » FACTS COMPLETE

Our customer magazin „COMPLETE“ is available in German and English. Additionally a download link can be found on our homepage.



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