





## A Tradition of Honest Machine Tool Building

At TOSHULIN, we do everything we can to ensure that our employees fully realize their potential, and that they advance professionally. This is necessary in light of technical and technological progress and the challenge from customers to constantly improve our machines. To remain viable in the market, a company must adapt and its employees must grow. TOSHULIN knows how to work with people and empower them to increase their qualification and help them develop. The possibility for career advancement is a prerequisite for maintaining qualified employees. TOSHULIN offers such opportunities, and has been awarded for that many times over as an attractive and stable employer.

## I. We go after every opportunity the market has to offer

Dagmar Herring,  
President and Chairman, Board of Directors, of TOSHULIN

***TOSHULIN represents traditional Czech and European machine building. But the word "traditional" is often perceived today as a synonym for old-fashioned. Is that not a weakness for your company?***

When we think of tradition, we think of our approach to the business at TOSHULIN. Our tradition is to put our customers first in priority, to always try to improve our machines to stay ahead of our competition, to always try to improve our processes to increase manufacturing efficiency, to constantly challenge our employees to upgrade their skills. When we talk about tradition, we allude to our strong corporate culture, built upon the ethics, knowledge, and skills of several generations. So, I do not perceive "traditional" as something historical or even old, but as something gradually built and reliant on the craftsmanship and know-how of technicians who came before us. At TOSHULIN, we are proud of our long tradition that informs our perspective, and generates new ideas and a vision for the future.



*Our vision is for all the companies of TOSHULIN to work and grow together. We have structured the company to maintain and enhance its technological leadership position, to be able to provide solutions to our customers, to be open to new ideas, and also to quickly learn from its mistakes.*

Dagmar Herring  
President, Chairman of the  
Board of Directors

***How would you characterize the main competitive advantage of TOSHULIN?***

We work very closely with our customers, and we excel at providing solutions precisely based on their requirements. And, it's not just a question of designing a machine that meets their needs - it must also be completed on schedule. This is something which one really cannot take for granted in our field. Almost all of our production is of machines that are in some way unique. From time to time, we will produce a small series of the same machines, but more commonly, each machine is one-off. When I joined the company, I felt this was a disadvantage but I soon came to realize that by working closely with our customers, we build a relationship of cooperation, trust and mutual respect that would not be possible if we were manufacturing commodity machines. Our creative approach to each contract and each customer requirement make up our true competitive advantage.

***Your company is a major exporter, like many Czech machine-building companies. How do you view the position of Czech companies?***

The Czech Republic has a well-established reputation for top-quality manufactured products, and I believe it is imperative that we maintain that reputation.





It has taken years to reach this position, and given robust global competition, we have to strive to maintain it. If Czech companies begin to thrive in some new fields and technologies, it can only be good for our collective reputation. As it is a small country, I believe the Czech Republic always will be export-oriented.

But nobody in Europe or the world is waiting for us, so we must invest more in innovations and build on the high quality that Czech machines have always represented historically.



***How does TOSHULIN do in terms of exports?***

In the last five years or so, our export volume has reached around 85-90% of turnover, so exports predominate our business. But we are also very active on the domestic market, and domestic revenue in the volume of 10-15% is no small amount. TOSHULIN does consistent business in the USA, Germany, and Russia, and has recently been exporting significant volumes of goods to China, France and Kazakhstan as well.

***Also closely relating to export is the possible sudden loss of a market, for example in relation to a geopolitical conflict. Does your company plan for such event?***

These situations really do occur, and it is essential for us to realize that we cannot influence them, and it makes no sense to even try. We need to take control of those things we can control.

From a strategic perspective, we want to grow, so we are continuously searching for new markets and new business opportunities. We are aided in this by a strong network of sales representatives forming a part of the group of companies surrounding TOSHULIN. The farther our geographic reach as a company, the less vulnerable we will be to conditions in any one specific country.



***The current trend in the industry is digitalization or Industry 4.0. How does TOSHULIN square up to this challenge?***

For us to remain among the world's best machine tool manufacturers on into the future, we obviously monitor and participate in these trends, such as digitalization or Industry 4.0. Our developers for instance, in cooperation with specialists from Siemens, have successfully created a virtual model of a machine tool controlled by a real CNC control system.

The result of this is a software and hardware set found nowhere else in the Czech Republic, enabling full-fledged simulation of a so-called PLC program on a virtual machine. Therefore, the program can be debugged long before the physical machine is manufactured and assembled. Modifications in the program can be made in advance, and its debugged version can readily be installed in the assembled machine.

Another important innovation is a software application designed for our customers' use. Our remote access application enables use of a standard Internet browser to ascertain the current situation of main components of a machine, the name of the currently running program, temperatures of key motors or the machine's current energy consumption. Data is also archived for later analysis. The application integrates image transmission from an on-line camera that captures events in the machine workspace. So, the machining process can be monitored in real time on a tablet or smart phone even from the opposite side of the globe. The application even informs the user how much more runtime until necessary maintenance, and reports the status of operating fluids. The remote access program has enabled us to troubleshoot the majority of service issues remotely, saving customers time and money.

***At the end of 2017, TOSHULIN acquired the companies TOS KUŘIM - OS, a.s., ČKD BLANSKO - OS, a.s., and ENERGETIKA KUŘIM, a.s. Why did your company opt for these acquisitions?***

We came in as the new owner knowing very well what these companies have achieved in the past and the range of machines they offer today. Our aim was to strengthen the position of the TOSHULIN companies, and to expand our portfolio of products. This enables us to continue to grow and address more potential customers.



TOSHULIN makes quality machines, it is a company offering a specific product, and our traditional customers know about us. Prior to these acquisitions, we were a relatively small company, offering only VTLs up to a certain size, and we believed that it would be beneficial to broaden our offer to include more products. So, the acquisition of TOS KUŘIM and ČKD BLANSKO makes sense. Our offer of machines now includes horizontal machining centers, large portal machining centers, and vertical lathes with large table diameters from four meters up.

***What about the synergistic effects of cooperation?***

TOSHULIN and TOS KUŘIM are technically modern companies offering high quality machine tools, and have similar customers and business partners. Like TOSHULIN, TOS KUŘIM also specializes in specific solutions for customers, so culturally the two companies are a "good fit." The acquisition created room for cooperation mainly in resource sharing. At TOS KUŘIM for instance, there is no small parts machine shop. TOSHULIN is now providing a number of parts, and performing assembly of some components for TOS KUŘIM, work previously performed by outside suppliers. Similarly, TOS KUŘIM is performing work for TOSHULIN that previously was performed by outside contractors. We expect to see more cooperation between the two companies in the design and manufacturing areas. The companies also cooperate in sales, procurement and HR management.

***Then came an acquisition of your long-term business partner in the USA, the company PILSEN Imports. Why?***



We have to continue to strengthen our market position, so the acquisition makes sense. Buying PILSEN Imports lets us expand our sales representative network. Over the last quarter century, TOSHULIN and PILSEN Imports have worked well together, and realized the sale of dozens of machines. PILSEN has a hard-earned reputation for professionalism and excellent service, and we were delighted to bring them into the TOSHULIN organization. When we contemplated the purchase, we did not see just a company, but a team of experienced salespeople and service employees. Pilsen has extensive industry contacts in North America, and now that TOSHULIN has grown to include TOS KUŘIM and ČKD BLANSKO, they have more products to offer to their customers. All this makes us stronger.



*Let's return to the beginning of the interview when you were talking about how the company tradition provides perspective, ideas and vision. What vision do you have of the future? Can it be described in some simple way?*

Our vision is for all the companies of TOSHULIN to work and grow together. We have structured the company to maintain and enhance its technological leadership position, to be able to provide solutions to our customers, to be open to new ideas, and also to quickly learn from its mistakes. All of that, naturally, is easier said than done. The

key to this now and in the future: maintain high-quality teams of people working in every area of the organization. We want to nurture technically educated people to gain experience with us, to pursue lifelong education and remain with us. In this way, we can preserve the tradition of top-level engineering in TOSHULIN companies.









## II. Innovation: the way forward

Innovation is critical for us to maintain our leading position in this competitive market. We do our utmost to constantly support **innovative efforts and activity inside the company**. Innovations come in many forms, and all support the overall growth of the company. TOSHULIN is relentless in these endeavours.

■ Firstly, and most importantly, we must constantly innovate to improve product quality in terms of durability, reliability, efficiency and longevity.

■ Second, we must innovate in our production processes, to more efficiently utilize our human capital, and to reduce assembly times and thereby shorten delivery times. Regular quality improvement and process streamlining are vitally



important. It is a continual process of enhancing quality in the company. Given that every machine we manufacture is in some way unique, it is vital that we make use of any possible improvements to our design and manufacturing processes.

■ Many of our company employees have ideas and suggestions for improvement, for saving on costs, for shortening production or assembly times. This is also a key component of the innovation process, and for years, we at TOSHULIN have done our best to capitalize on these ideas. As an incentive to contribute ideas, we reward employees whose ideas are put into practice.

## Product innovation

In the case of product innovation, TOSHULIN invests in strategic development, which is a long-distance run. The development of a new machine design, or making a qualitative change to an existing design, can take years to become reality. It is a very financially demanding endeavor but one that is essential. In addition, the company collaborates closely with customers, customizing machines according to their specific demands. Often, our machines are customized to a significant degree, incorporating our best ideas to meet the customer's unique needs.

TOSHULIN has extremely talented, experienced, and knowledgeable designers, rivalling any in the field. In our efforts to continually improve our products and processes, we cooperate with universities, research organizations and trusted suppliers. Know-how in TOSHULIN has been built up over many years, and has always led to innovative ideas. All this enables the company to maintain its leadership position on the global market.



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*Vojtěch Frkal,  
technical director*



## Innovative machines

The machine EXPERTURN 1600, whose technical parameters significantly push the limits of technological possibilities. It is equipped with direct drive spindles - electrospindles, which is an utterly unique technology on vertical turning lathes. Integration of electrospindles raises the maximum speed of rotating tools from 4,000 rpm to up to 8,000 rpm, with the potential for even higher speeds in the future. Customers can thus make better use of modern tools of smaller diameters, or implement modern high-speed machining methods.



Machine from the family FORCETURN. The guidance of the X and Z linear axes of this large vertical machining center is hydrostatic. Using hydrostatic guideways is nothing new for TOSHULIN. We've already produced machines with hydrostatic guideways on linear axes, but with a smaller turning table, typically 1600 mm in diameter. But the new FORCETURN has a 4000mm diameter table. When using hydrostatic guideways, the larger and more powerful the machine, the more difficult it is to ensure geometric accuracy of the guide surfaces. TOSHULIN has met this

challenge, and the full FORCETURN line is now offered with hydrostatic guideways.

The unique EXPERTURN 1400 S, which is primarily designed for roughing railway wheels, is a completely new design - we started with a blank sheet of paper. Working closely with a major railway wheel manufacturer, we designed the EXPERTURN 1400S to be highly efficient, with high-power cutting for rapid roughing of wheels. After extensive, demanding customer testing, the EXPERTURN 1400S is now hard at work in the customer's factory. The EXPERTURN 1400 S is now a part of our regular product portfolio.



## Innovation in production and during assembly

The high-precision machining center HECKERT 800 X5, acquired by TOSHULIN and gradually being brought into production, enables the company to satisfy customer requirements for machines with ever increasing accuracy. It also brings TOSHULIN a competitive advantage, because it has in its production hall a machine that can manufacture high-precision parts. This innovative technology enables us to manufacture holders of a series of special rotary tools with truly exceptional precision. The new five-axis center HECKERT 800 X5 guarantees machining to exceptional tolerances and accuracies: hole alignment 0.006 millimeters and hole cylindricity 0.0025 millimeters. Customer requirements are ever more demanding for high precision, which necessitates

ever more precise machines in our production hall. A few years ago, typical tolerances were measured in the hundredths of millimeters, and today, customer requirements are in the thousandths of millimeters, an order of magnitude smaller. Until recently, neither TOSHULIN nor its suppliers were capable of achieving these levels of accuracy. So, for the company, the HECKERT 800 X5 represents a costly but highly innovative technology, which eventually will also be applied to production of machining heads for TOS KUŘIM or cooperative contracts.



*Our customers are continually seeking ever finer tolerances from their machine tools. By extension, we must invest in ever more precise manufacturing technologies. By purchasing the highly accurate horizontal machining center HECKERT 800 X5, TOSHULIN took a step towards far higher precision. We acquired innovative technology, thanks to which we can manufacture holders of a series of special rotary tools with truly exceptional precision.*

*Karel Saramák,  
director of production  
and assembly*





## Test benches assist assembly

Recently, TOSHULIN invested in the acquisition of two test benches - one for testing machining heads and brackets, and one for testing slides. This investment represents a qualitative advancement for the company. The ability to test these components off of the destination machine helps shorten assembly and testing times, ensuring product quality and leading to earlier delivery to customers.



Prior to the installation of the test benches, testing of heads, brackets and slides could only be performed on a completed machine. Thanks to these benches, advanced testing and running-in are possible prior to mounting on a machine. As a result, these components are mounted on the machine having already undergone a qualitative test. It translates not only to shortening delivery timelines, but also to decreasing costs.



## Information system manages company processes

The information system is an initial, important tool for controlling processes in the company. For many years, the IFS information system has been one of the standard management tools that TOSHULIN applies. The supplier is the company Altec, which knows our company very well. This system introduced here in the past represents for TOSHULIN a high level of process continuity.

Implementation of the system is managed in TOSHULIN by means of a team of guarantors who, in terms of IT, represent the pinnacle of knowledge in the company. They play an active role in presentation and consultation with suppliers, and have a vision of how the company should function in the future, how processes will look, and with what information they will be working. If a company is alive, so too must its information system be; it must react to the surrounding environment and to changes in markets. So one of the company's fundamental tasks is to increase its use and regularly perform upgrades of the entire system.



*TOSHULIN is a modern company offering a high-quality product, and the methods and procedures applied in management must correspond to this. Growth in quality or processes helps TOSHULIN grow. The company is under constantly increasing pressure in terms of customer deadlines. The potential for acceleration lies in the company's streamlining of the course of the contract, and one essential condition is a functioning information system.*

*Martin Kvapilík,  
director of quality and IT*



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TOSHULIN regularly upgrades its systems, because substantial changes occur in the architecture of IT technologies and equipment rapidly becomes obsolete. Upgrading the information system is not just a major financial investment, but also an investment in terms of people across the company and their productive time.

## Certified quality

TOSHULIN is a company that takes quality very seriously. It is an area without which it cannot succeed over the long term on the demanding global market. TOSHULIN has undergone all necessary audits and successfully attained all quality process certifications.

In 2016, TOSHULIN became ISO 9001 certified. With this certification, TOSHULIN is able to bid on many more contracts globally, where the certification is mandatory for eligibility. In 2016, ISO 9001 certification became a necessary condition in China for participation in tenders announced by state companies. The standard ISO 9001 thus became an advantage for TOSHULIN not only for cooperation, for which it had originally been intended, but also for its main production.



## Queen of the improvement movement

A good idea can come from anywhere. Improvement, ideas, proposals, an active approach taken by employees...this is yet another part of the innovation process applied in TOSHULIN. Tomáš Baťa once said, "Toil to the machines, ideas from the people." Introduction of an improvement movement in his factories was a given. And TOSHULIN too upholds this.



*Without the ability to come up with new ideas and products, a company today does not stand a chance to succeed over the long term in the market, so the support of its employees to improve things and processes around them is necessary, and must be encouraged. Improvement concerns the way of thinking, considering, the ability to observe things around oneself and consider what could be done better, faster, in higher quality...It applies that a good idea may come from anywhere, so it is necessary to pay attention to all persons involved.*

*Libor Faltus, director for special projects and planning*

A functioning system of gathering ideas, their assessment and later introduction into practice may be of substantial help to a company. TOSHULIN introduced such a system in late 2014 and early 2015. The improvement movement was named ZITA, which is the name of the last Bohemian queen, but is in fact an acronym for key words (in Czech): IMPROVEMENT, INNOVATION, TECHNOLOGY, ACTIVITY. The aim of the company is to keep pace with the competition, which cannot happen without constant improvement. And here we also find room for employees to come up with their own ideas and thus take part in improving TOSHULIN. All employees must work on themselves, and if possible, also on new solutions for products and processes.

Improvement concerns the way of thinking, considering, the ability to observe things around oneself and consider what could be done better, faster, in higher quality...It applies that a good idea may come from anywhere, so it is necessary to pay attention to all persons involved. Improvement proposals need not resolve only a demanding technology that secures savings in the thousands and hundreds of thousands. Even small improvements concerning occupational safety, environmental protection, work organization, etc., with a positive impact in the company, are always welcome.



### III. Clear market position as an exporter

The quantity of machines manufactured and supplied over the company's history is proof that TOSHULIN maintains a strong position on the global market. The company has sold over 13,600 machines that have served and continue to serve customers in over 70 countries worldwide. TOSHULIN is an export-oriented company whose export share reaches up to 90% of its overall production. When supplying globally, TOSHULIN relies on its broad network of representatives, distributors



*TOSHULIN manufactures machines designed for many industrial branches. While our business is dominated by the aerospace sector, other key areas of supply include the oil and gas industry, power generation and machining of rail wheels.*

*Pavlína Křepelková,  
sales director*



and own foreign representations spread out around the world.

The most consistent markets over the long term include Germany, France, and the USA, as well as the Czech Republic itself. The Czech market, despite its relatively small size, regularly purchases 10-15 percent of TOSHULIN production. The territory of China has shown strong demand for TOSHULIN VTLs in recent years, ranking among the world's largest and most important machine tool markets.

TOSHULIN has also penetrated distant territories such as Brazil and Mexico. It has been successful for years in the demanding US market. The company's success is founded on its collaborative approach with every customer, the ability to offer a technical solution based on customer needs, and the warranty and after-warranty care provided either in the form of servicing or providing spare parts.



## Machines for demanding fields

Technical advances are occurring not only in the aerospace industry, but in other industries as well, and TOSHULIN supplies machines to them all. One vital aspect is the share of supplies for the aerospace industry. As design and technology advance in aerospace, OEMs demand ever higher precision and efficiency from their machine tools. In this part of the market, the company capitalizes on its experience with manufacturing VTLs and machining centers, and meets the demanding requirements for machining aircraft engines and their parts. In recent years, TOSHULIN has fulfilled several contracts affiliated with manufacturing LEAP aircraft turbofan engines for various customers.



The situation is similar with supplies for machining railway wheels, the oil and gas industries, power generation, mould manufacturing and others.

The area of manufacturing railway wheels is very interesting, where in cooperation with a major Czech railway wheel producer, a "railway special" VTL was developed, whose parameters let it proudly thrive in the face of competition from manufacturers specialized in this area of machining.

At TOSHULIN, we know that machines must achieve and maintain the same parameters and properties for many years. TOSHULIN VTLs are legendary for their ability to hold tolerances over decades of continual use.



## IV. People are the bearers of the machine-building tradition

Behind everything at TOSHULIN, we see the work of a specific person. We know that people form the backbone of success in a challenging market, and that the future generation of technicians represents the alpha and omega. If we don't have them, we lose our dominance in continuous development of knowledge and skills, and soon become replaceable by another brand. TOSHULIN relies on quality employees - leading experts who keep on learning. We offer our employees a quality social program and a series of benefits. And each year, we prepare and deliver to them dozens of training and qualification courses.

TOSHULIN continues to attract young technicians, a scarce commodity in today's labour market. We have established a process for cooperating with general and vocational secondary schools. The model is built on long-term cooperation with regional schools, whose students TOSHULIN invites to engage in on-the-job-training. We also offer them benefits in the form of motivational contributions and a scholarship program. Our ability to attract, support, and ultimately hire a growing number of graduates affirms the efficacy of this route.

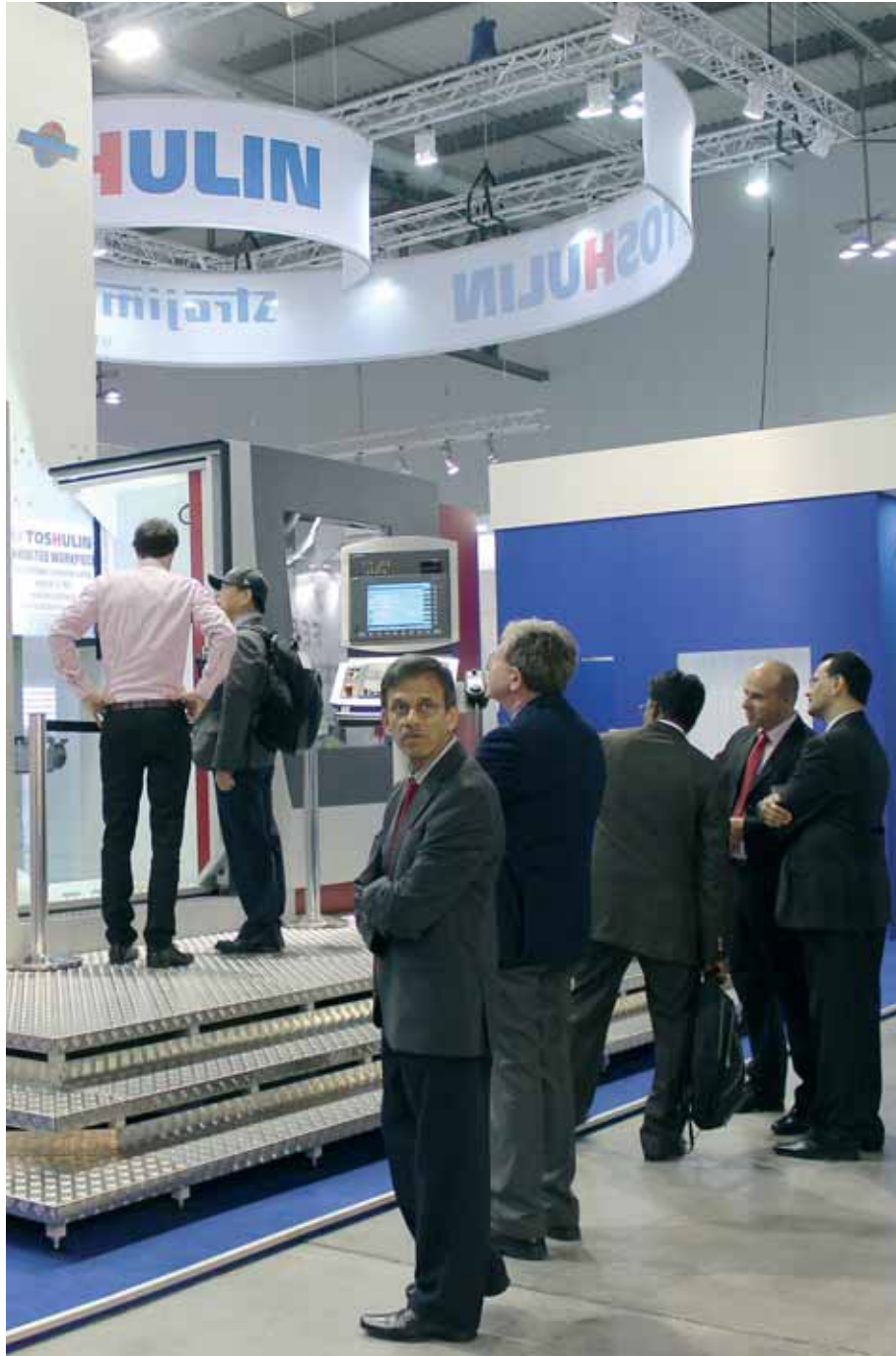


*The future generation of technicians is the alpha and omega for TOSHULIN. If we don't have them, we lose our dominance in continual development of knowledge and skills, and soon become replaceable by another brand. We rely on quality employees - leading experts who keep on learning.*

*Michal Jansa,  
Director of Human Resources*

## Managing talents

At TOSHULIN, we do everything we can to ensure that our employees fully realize their potential, and that they advance professionally. This is necessary in light of technical and technological progress and the challenge from customers to constantly improve our machines. To remain viable in the market, a company must adapt and its employees must grow. TOSHULIN knows how to work with people and empower them to increase their qualification and help them develop. The possibility for career advancement is a prerequisite for maintaining qualified employees. TOSHULIN offers such opportunities, and has been awarded for that many times over as an attractive and stable employer.





## V. Tradition, accuracy, reliability

Today, TOSHULIN vertical turning lathes are in continuous use in the most demanding industries in the world. Our VTLs are legendary for their precision, power and durability, and their ability to hold tolerances through decades of use. Our customers know they can count on TOSHULIN, and our products.

TOSHULIN is one of the world's top producers of multifunction vertical machining centers with table sizes from 800mm to 6000mm. Machines made by TOSHULIN provide comprehensive machining solutions, incorporating all machining technologies including turning, milling, grinding and drilling operations. The machines are very rigid, highly precise and all have automatic tool exchange of both turning and live tools. Machines can be made with an automatic workpiece



exchange. As a result, less manipulation of workpieces is required, and productivity is greatly improved. The machines provide the highest-level solutions. The high degree of customizability makes it possible to satisfy each customer's specific requirements and high demands put on supplied machines.

### TRADITION, ACCURACY, RELIABILITY

TOSHULIN machine tools are used by customers in more than 70 countries in the world. We constantly strive to discover new customers in existing or new world territories.



## The TOSHULIN Portfolio of Products

■ **BASICTURN vertical lathes** - user-friendly Numerically-Controlled machine tools that enable machining of an extensive range of workpieces.



■ **POWERTURN Vertical machining centers** - enable fast and productive machining of workpieces with complicated shapes due to the great variability of technical parameters and tooling.



■ **EXPERTURN multifunctional machine tools** - the ultimate in customization. With the most complex technical parameters, designed for unique applications to satisfy the most demanding customers.



■ **FORCETURN** machines are specified for aggressive cutting of large, heavy workpieces.



■ **SPECIFIC PURPOSE MACHINES** - special machines for railway wheel cutting, with design and configuration based on the customer's needs. The machines are distinguished by their high productivity, rapid rough cutting of railway wheels. The finishing configuration of the machine offers large technological variability.

## Retrofitting and modernization

TOSHULIN has a team of specialists that focus on retrofitting and modernizing existing equipment from TOSHULIN production. Customers can rely on our ability to extend the working life of their machines for a lower cost than buying a new machine.

## Production

The production facility is divided into four primary areas: large part manufacturing, small part manufacturing, the vertical lathes shop, and the sheet metal shop.

■ In the large part manufacturing area, we produce all of the primary components for our machines. Our manufacturing equipment has been chosen accordingly. We have a Zimmermann FZ42 multi-axis machining center, a TOS KUŘIM gantry mill FRFQ 350, horizontal boring machine W160 and a grinding machine SZ 22 20. With this equipment we can fulfill the high demands put onto the production of components of our machines.

■ Small part manufacturing covers production of all smaller parts of our machines which include spindles, shafts, flanges, clamping units, and bodies of heads, among other components. We have machines from Tajmac-ZPS, Mori Seiki, Junkers, MAS and others. The latest addition to the workshop is a highly precise 5-axis machining center from Heckert.

■ The Vertical lathes shop is equipped with machines from our own production - SKIQ 16, BT 2000, BT 1250, PT 2000, ET 3000, and FT 4000. In addition to their use in our own production, we offer the capacity of this workshop to our customers.

■ The sheet metal shop is mainly for production of protective covers for our machines.



## Assembly

- Assembly of highly customized machines, where we assemble mainly EXPERTURNS, POWERURNS and FORCETURNS.
- Assembly of BASICTURNS, modernization and retrofitting of older machines.
- Electrical systems install.
- Paint facility.
- Shipping facility.

The Production and Assembly Department consists of the Manufacturing Engineering section and the Assembly Engineering section. In this department, employees are divided into manufacturing application engineers and into assembly application engineers. Our manufacturing engineers design the processes for creating the components, both large and small, of our machines, using our factory's equipment. Our Assembly Engineers design the actual process of assembling the components into the finished product, ensuring that the assembly sequence is correct, the proper tools are used, and tolerances are tested.



Another important part of the Production and Assembly Department is the Department of Piece Work. As noted above, we offer the capacity of our VTL shop to our customers. This is an important service that we provide, sharing our productive capacity with our customers when they need it.





## VI. TOSHULIN GROUP

### TOSHULIN (Czech Republic)



■ TOSHULIN was established in 1949, and assumed the form of a joint-stock company in 1998.

■ Its subsidiary TOSHULIN Russia Ltd. was established in 2009 in order to boost sales and improve the quality of machine service and supply spare parts to the Russian market.

■ That same year saw the take-over of the joint-stock company STROJIMPORT a.s. and its companies. STROJIMPORT is a leading exporter of Czech and Slovak machine tools and forming

**Strojimport®**

machines. It has contributed greatly to the good name of manufacturing brands of Czech and Slovak machines worldwide. The company has been doing business in this field for over 60 years, and in that time, it has built up a reputation as a solid and stable partner, and an expert with many years of rich experience and know-how in foreign trade.

■ In 2012, TOSHULIN opened operations in China, one of the largest and most important machine tool markets in the world. The subsidiary TOSHULIN Machine Tools Co., Ltd., was established in Shanghai.

■ In 2018, the group grew to include TOS KURIM - OS and ČKD BLANSKO-OS. This acquisition expanded our offer of machines, to include horizontal machining centers and very large vertical lathes with table diameters from four meters and up.

TOS KURIM was established in 1942. The trademark has a worldwide reputation of reliable and precision, long-life machine tools. The company's manufacturing program focuses on large milling machines and machining centers, which enable machining of large and heavy, highly complex workpieces, from up to five sides using continuous control in five axes. The main technological advantage of machines by TOS KURIM is their system of automatically exchangeable spindle heads of its own development, design and manufacture. Its machines find application mainly in heavy

industry, and in the power generation, railway, defense and aerospace industries. An expansion of its facilities enabled TOS KURIM in 2011 to relocate production of its sister company ČKD BLANSKO-OS, which specializes in development, design, manufacture and assembly of heavy vertical lathes, in single or double-column design. By combining both companies in one factory, a unique manufacturing enterprise was established with a wide portfolio of offered machines and strong technological background.



■ Acquisition of the company PILSEN Imports, Inc., in the USA was also completed in 2018. Pilsen Imports has been a strong sales and service partner with TOSHULIN since 1996.



## VII. History of TOSHULIN

The first industrial production in the town of Hulín began in 1938, when the company Elektromotor SKRAT, which was established and owned by the Rýznar brothers, moved its operations and production from Zábřeh na Moravě to Hulín. The company originally produced washing machines, but the production focus changed during World War II when the company began to specialize in electromotors.



### 1949



■ A building permit was awarded in May to build a factory for electromotor production and the construction got underway in October.



### 1950

■ In June, the administration building and a part of the production hall were opened. In August, the production of electromotors and dynamos started. The factory was at the time one of the subsidiaries of n.p. MEZ Frenštát pod Radhoštěm

### 1951



■ Reorganization took place among the factories in the region and TOSHULIN became a part of n.p. ZPS Zlín (Gottwaldov)<sup>1</sup>. After the reorganization, the production program of the factory was changed to the production of vertical lathes, sheet metal edge planers and horizontal slotters.



### 1952

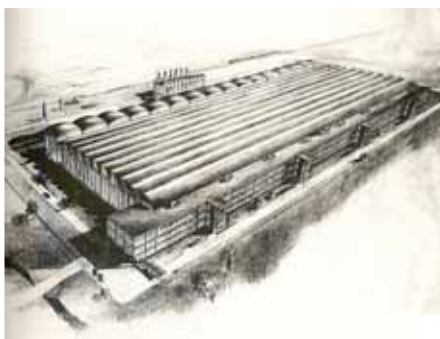
■ The first series of vertical lathes was produced - the SK product line. In the ensuing years, TOSHULIN built 2747 machines of that product line.



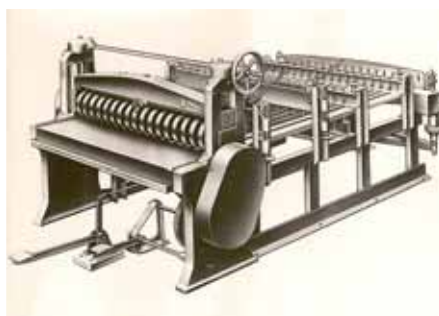
<sup>1</sup> The town of Zlín was renamed Gottwaldov by the communist government, and this was the name for Zlín from 1948 until 1989.



*Family Houses for Employees of the Hulin Company, ca. year 1954.*



*The architectural engineering of the factory in Hulin, one of the last important works within the classical era of Zlín rationalism, was performed by Zdeněk Plesník.*



*One of the earliest machines produced at the Hulin Company.*



*View to the 1st Transept of the assembling of serially-produced, manually controlled, Vertical Lathes of the SK series.*



## 1954

■ In January the construction of a forge got underway. This same year, an autonomous company was formed, named ZPS Hulín, n.p. The production portfolio grew to include manufacturing of woodworking machines, drilling machines, hydraulic presses, gantry and special milling machines.

## 1955

■ Beginning of construction of new apartments for employees of the factory.

## 1959



■ The factory returns to the fold of ZPS Zlín (Gottwaldov), n.p. The factory designed and produced the first vertical lathe with continuous working feed, numerically-controlled axes movements and tracing. This was the first numerically controlled machine tool produced in Czechoslovakia, and one of the first numerically controlled lathes in the world.



## 1963

■ The construction of a second, smaller production hall started. This facility was mainly used for finer and lighter metal cutting production. The hall opened to production in 1965.

## 1969

■ The autonomous company named TOS Hulín, n.p. was established.

## 1974

■ The start of production of vertical lathes with automated tool exchange - the venerable SKIQ line, which is still in demand and manufactured to this day.





*TOSHULIN 1979 and 2019.*



## 1980

■ TOS Hulín, k.p. becomes one of the companies in the pool of Továrny Strojírenské Techniky Praha. The focus of TOS Hulín production within the pool was on manufacturing of CNC vertical lathes, automated railway wheels production, copy milling machines, plane milling machines and CNC lathes for schools.



## 1986

■ The production of our first machine with C-axis and pallet changer.

## 1989

■ TOS Hulín, s.p. was established as an independent company on July 1<sup>st</sup>. The main focus of the company was to produce vertical lathes with 800mm to 3000mm diameter turntables and special machine tool for production lines in the automotive sector.

## 1996

■ On July 1, TOS Hulín, s.p., becomes a privately-owned company. The newly established company, TOSHULIN, s.r.o., takes on all the rights and obligations of the predecessor company.

## 1998

■ TOSHULIN, a.s., is incorporated on January 1<sup>st</sup>.

## 1999



■ The company discontinued production of SKS series vertical lathe and started to produce the next generation of machines under the name of POWERTURN.



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## 2001

- Production began of new types of machines - SKL and SKG



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## 2002

- Production of machine with 4m table diameter.

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## 2005

- Production of first machine with Y-axis and a Y-head.

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## 2008

- Production of first machine with 4,000 RPM live spindle.



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## 2009



- TOSHULIN made the largest investment in the history of the company, to upgrade our manufacturing technologies. The majority of manual and conventional machines in the TOSHULIN factory were replaced by CNC machines.



- TOSHULIN acquired the machine tool distribution company STROJIMPORT.

- TOSHULIN established a subsidiary, sales and service center, in St. Petersburg, Russia.

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## 2012

- TOSHULIN established a subsidiary, sales and service center, in Shanghai, China.

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## 2014

- The company made a significant investment into repairing old buildings on the factory grounds, demolished ones no longer suitable for the business and built a new warehouse.



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## 2017

- TOSHULIN acquired TOS KUŘIM, ČKD BLANSKO and ENERGETIKA KUŘIM.

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## 2018

- TOSHULIN through its US subsidiary TOS USA, acquired PILSEN Imports, Inc., in Cincinnati, Ohio.





## VIII. Major investments by TOSHULIN

Investments enable TOSHULIN to produce increasingly complex machines and maintain its leadership position on world markets. Since 2000, we have invested a total of 824 million Czech Crowns ("CZK") into the factory. The investments break down as follows:

CZK 213 million went into repairing and upgrading buildings and structures;

CZK 469 million went into new machines and equipment;

CZK 72 million went into instrumentation, IT infrastructure and software;

CZK 70 million were invested in operation maintenance and asset repairs.

To help finance these investments, TOSHULIN drew subsidies from funds of the EU and the Ministry of Industry and Trade of the Czech Republic totalling CZK 95 million.



### Buildings and structures

- 2001 - 2004 Complete painting of the Heavy Machinery Hall.
- 2004 - 2005 Repair to the roof cladding of the Heavy Machinery Hall.
- 2006 Reconstruction of the gatehouse.
- 2007 - 2004 Window replacement of the Heavy Machinery Hall.
- 2008 - 2012 Machining revitalization (locksmith workshops, assembly of heads and slides, machine foundations, floors, etc.).
- 2013 Revitalization of part of the TOSHULIN complex.
- 2014 Construction of a new parking lot.
- 2015 Structural modifications to a former health center for the sales department.
- 2016 - 2017 Comprehensive Energy Saving Project.
- 2017 Design documents of the Surface Treatment Hall and Cooling of the Heavy Machinery Hall.



*Since 2000, TOSHULIN has invested 824 million Czech Crowns back into the company. These investments allow us to build more sophisticated and precise machines, and to maintain our leadership position in the world market.*

*Vítězslav Vlček,  
Head of Maintenance  
and Premises*



## Machines and equipment

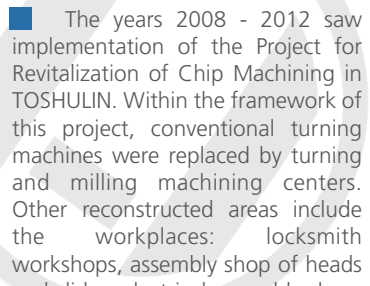
- 2008 - 2012 Revitalization of chip machining.
- 2012 Carousels B1250 C-M.
- 2013 Revitalization of part of the TOSHULIN complex (technologies, Kardex systems, cranes, handling technology).  
Supply and assembly of the machine FOC 4000.
- 2014 Supply and assembly of the machines ET 3000 and BT 2000 C2.
- 2015 GO machines SZ 22-20-10.
- 2017 Comprehensive Energy Saving Project - Stage 2
- 2018 Project: Innovation of Turning Machining Centers and their Launch on World Markets.

## Measuring and computer technology including software

- 2004 Acquisition of a new information system IFS.
- 2008 Measuring and presetting instrument ZOLLER VENTURION 600.
- 2010 Creation of a work station for the 3-D Coordinate Measuring Machine WENZEL LH 108.
- 2010 Laser measuring system LASER TRACKER LTS 30000.
- 2018 Upgrade of the measuring machine MERLIN 1100.

■ In the framework of revitalization of part of the premises of TOSHULIN, a.s., demolitions were performed of old and unused building objects (e.g., the old boiler room, central warehousing building, sheet metal warehouses, outbuildings and shelters, etc.), the garage (transport) building was renovated for storing hazardous wastes, and new buildings were constructed - the logistics hall, the blanks hall, the outdoor cast iron warehouse, oxygen evaporation station, and related infrastructure network relays were performed as well as basic repairs to walkways and roads on the premises. Total investment expenditures (construction + technologies) totalled CZK 77 million.





■ The years 2008 - 2012 saw implementation of the Project for Revitalization of Chip Machining in TOSHULIN. Within the framework of this project, conventional turning machines were replaced by turning and milling machining centers. Other reconstructed areas include the workplaces: locksmith workshops, assembly shop of heads and slides, electrical assembly shop, tool setting shop, expansion of the measuring center including repairs to floors and walkways in the Heavy Machinery Hall. Investment expenditures totalled CZK 208 million.



■ The years 2004 - 2005 saw the repair to the roof cladding of the Heavy Machinery Hall. Complete replacement was performed of the covering and gutters, including insulation, replacement of glazing of skylights and repair of lightning conductors. Investment expenditures reached CZK 24 million.



■ The years 2016 - 2017 saw implementation of the "Comprehensive Energy Saving Project". This involved performance in the Heavy Machinery Hall of the complete reconstruction of artificial lighting, installation of a covered entrance, reconstruction of the boiler room and installation of heating control in changing rooms. Investment expenditures totalled CZK 17 million.

■ The year 2018 saw implementation of the project "Innovation of Turning Machining Centers and their Launch on World Markets". The subject of this project was acquisition of the machine HEC 800x5 including foundation underneath the machine, tooling and a crane bearing 5t. The investment totalled CZK 28.6 million.



## IX. We are part of the region

We are mindful of the region we operate in, where we belong. We know that most of our employees are from this region and we are naturally interested in its development. So, each year, we financially support interesting cultural, social, civic and study projects. Through the years, we have been sharing the company's good fortune with the nearby community, combining the good feeling from the company's positive economic results with the joy of helping those in need.

### Sponsorship projects

We divide our assistance into two areas. The first is direct financial support to selected projects in the form of sponsorship, where we appeal to those seeking our support to submit their project.

Over the past five years, we have provided nearly 3.9 million Czech Crowns in this manner to interested parties.

### Charity collections

The other way we support our community is through an annual charity collection whose final distribution is traditionally linked to the TOSHULIN Christmas Market. Employees take part, and TOSHULIN matches the amount they collect amongst themselves.

Over the past eight years, we have been able to collect and distribute nearly 900,000 Czech Crowns, and the money has gone to help the following endeavors:

#### Purchasing adjustable beds

Thanks to all TOSHULIN employees and management for the sponsorship donation. We used the money to purchase three fully adjustable beds for our clients with severe physical disabilities. The aim of our home is to enable disabled persons to live a full, dignified and attractive life, and your gift helps in achieving this. It is good to find people and companies who care about the fates of those lacking that which is most valuable - their health.

*Mgr. Věra Mikulová, director of the Barborka Home for Disabled Persons*



**You have made our clients' lives easier**

We are always quite pleased when we can make our clients' lives easier through some new aid or equipment. And it makes us all the happier when somebody contributes to this worthy cause through the gift of giving. This time it was TOSHULIN and its employees. From the money we collected, we acquired a cardiac chair for clients of the Peaceful Old Age Charity House in Cetechovice. We thank you once again on behalf of all our clients.

*Mgr. Anna Valachová, DiS., director of Charity Kroměříž*



**You helped create a home environment**

We used the money to modernize the environment for the children of our children's home. Your gift played a vital role in helping us to achieve the goal of our facility - to create an aesthetic home environment that children will project in the future in their personal lives after leaving institutional care. We are deeply grateful for your financial gift and sincerely thank you once again.



*Kamil Hrudík, care provider of the Children's Home in Kroměříž*

**After school club aids and furniture.** Let us thank you for the very generous sponsorship donation you bestowed upon us - a set of communicators, as well as further support for development of communication and speech. We also thank you for the safe furniture for our after-school club department, and for the set of balance pads used for developing gross motor skills and sensory perception. Your gift has warmed our hearts and those of our students. We greatly appreciate your favor and affection.



*Mgr. Pavlína Frdlíková, principal of the J.A. Komenský Primary School in Otrokovice*



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