

Topics: ProfiMill for wood processing industry ready for use in 12 months ▶ Interview with Stefan Elze, General Manager of the Beijing Representative Office ▶ Customized drive solutions by RSGetriebe ▶ Successful turning and milling days

Profitable investment: machine manufacturer raises efficiency with ProfiMill 1

ProfiMill 1 Proves itself in Day-to-Day Production



Precise and flexible: the ProfiMill 1 contributes to the increase of efficiency at Herkules Meuselwitz

As a result of the continuing steel crisis, even companies in related industries, such as manufacturers of roll machining equipment, are forced to optimize production costs. Maximilian Thoma, President of Maschinenfabrik Herkules Meuselwitz in Germany, a sister company of WaldrichSiegen, achieves this aim with the help of strategic investments: “We have made some carefully planned investments in our machine inventory in the past years in order to be able to manufacture in the most efficient way possible – one of these was a ProfiMill 1 by WaldrichSiegen.”

When the decision fell to order a portal milling machine, efficiency was one important focus – another was the high machining quality, one of the cornerstones for the technological leadership in the market occupied by Herkules Meuselwitz. “It was of major importance to us that the new machine meets the highest standards in terms of precision, that it is low-maintenance and extremely durable. From an economic point-of-view, of course the investment was supposed to have a short amortization time,” says Maximilian Thoma. All these advantages promised to be combined in the ProfiMill 1, the smallest size range of the ProfiMill series by WaldrichSiegen, which rounds off the successful series of portal mills in the area of smaller and medium-sized workpieces.

First machine an all-round success

The ProfiMill 1 for Herkules Meuselwitz was the first machine of this size to leave the production facility of WaldrichSiegen. It has been in production at the German machine tool manufacturer for two years now – with great success. “The ProfiMill 1 has a clearance of 3.5 m between the columns and is used primarily in the machining of machine beds, grinding saddles, and in contract manufacturing. It works to the exact micrometer. At a length of 6 m, we achieve an accuracy of 6 µm,” says Maximilian Thoma.

Even at design stage, a strong focus had been placed on guaranteeing that the ProfiMill 1 does not just work with absolute precision now, but also after many years. “Other manufacturers’ machines require re-scraping of the guidance rail in the cross rail after a few years. That is not necessary with this ProfiMill. The cross rail can simply be re-aligned with the help of our supporting bridge,” explains Mechanical Engineering Manager Ralf Tschersche. “At the same time, the cross rail is mechanically compensated – this means that the precision of the ProfiMill is reproducible over the entire service life.”

Since Herkules Meuselwitz decided in favor of a machine with a fixed cross rail, the portal columns were cast from concrete. WaldrichSiegen thus takes advantage of the damping characteristics of concrete, which are twice as high as those of cast iron. The advantage for Herkules Meuselwitz in day-to-day production: excellent damping and the optimized stiffness of the portal, as well as the entire machine.

All other structural components of the machine are made of cast iron. Consistent use of cast iron guarantees stable damping and temperature characteristics of all components. “The ProfiMill 1 is thus extremely thermostable over the entire production day,” says Maximilian Thoma. “In addition, the service life of the tools has proven to be longer compared to other machines. Here, too, we benefit from the good damping characteristics of cast iron and hydrostatics.”

Hydrostatic guideways without any metallic contact in all axes were a deciding factor for the ProfiMill 1 when Herkules Meuselwitz analyzed the sustainability of the investment project. “After careful consideration, we decided to invest in a fully hydrostatic machine.

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Dear readers,

Companies and entire industries with international business are faced with a growing number of new challenges and insecurities, such as local economic crises, political changes of direction, jeopardized international economic and climate agreements, economic sanctions or growing protectionism. Long-term planning is becoming more and more difficult for production companies due to ever-changing framework conditions. This particularly affects investments in new production equipment. In many cases, however, such investments are absolutely essential in order to achieve an increase of efficiency and productivity and to combat the economic pressure caused by globalization and competing new technologies. Production is becoming more and more interconnected and processes are becoming more integrated and more transparent – catchphrases such as “Industry 4.0” and “Digitalization of Processing Chains” are omnipresent.

In this insecure and demanding environment, an experienced and strong partner is a great help. WaldrichSiegen, with its history that spans more than 177 years, has proven itself successful when it comes to handling constant change. We identify and develop

the respective ideal production solutions together with our customers – be it a new machine, a machine modernization, or expanding the field of applications and range of functions of existing machines.

In order to be able to meet our customers’ requirements even better, we are constantly expanding our product portfolio – with new size ranges, such as the ProfiMill 1; integrated processes, such as mill-turning; or customized additional components and technologies. Thus, WaldrichSiegen is a strong, innovative and reliable partner to its customers even in difficult times – now and in the future, with a wealth of experience and machines that are known around the world for their power, precision and reliability.

Marco Tannert
President and COO

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On the one hand, there are the clear advantages in terms of precision and on the other, we save maintenance costs in the long run.”

Flexible machine concept

The broad range of workpieces machined at Herkules Meuselwitz is one of the biggest challenges for the machine inventory. The ProfiMill meets this challenge with a high degree of flexibility. The set-up table is generously dimensioned with a size of 2.5 m × 6 m. This is also important when it comes to contract manufacturing – for example when Herkules Meuselwitz machines the housing of an XXL helicopter test bench gear for its sister company RSGetriebe (see picture).

The machine covers not just different workpiece sizes, but also different machining applications. A universal milling head with high torques and speeds that can be swiveled by 360° and 180° respectively in both directions covers a broad machining range.

After around two years of service in his production facility, Maximilian Thoma draws a positive conclusion: “The investment in the ProfiMill has paid off. With its stability, precision and low downtime, the machine significantly contributes to our goal – an increase of efficiency.”

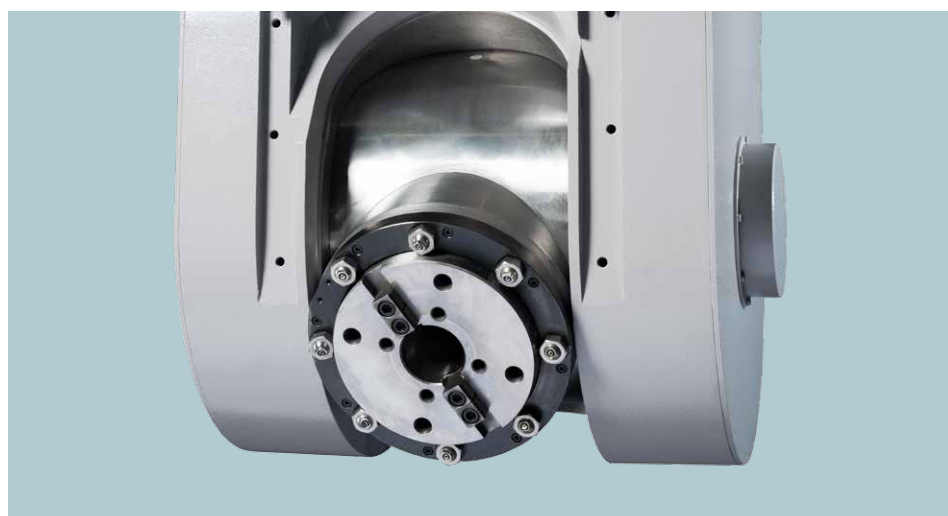


The ProfiMill 1 machines the housing of an XXL helicopter test bench gearbox

Customized solution for the manufacture of surface finishing machines

ProfiMill Ready for Use in 12 Months

When the CEOs of two medium-sized German companies – commonly known as “Mittelstand” – make a deal, for example a sales contract for a heavy-duty machine tool, it may still be sealed with a handshake. Provided, of course, the deal is based on a relationship of mutual trust, as is the case here: Heiner Wemhöner, CEO of Wemhöner Surface Technologies GmbH & Co. KG and Christoph Thoma, CEO of WaldrichSiegen agreed on twelve months delivery time for the manufacture of a ProfiMill.



Universal spindle unit for flexible machining of laminate press components

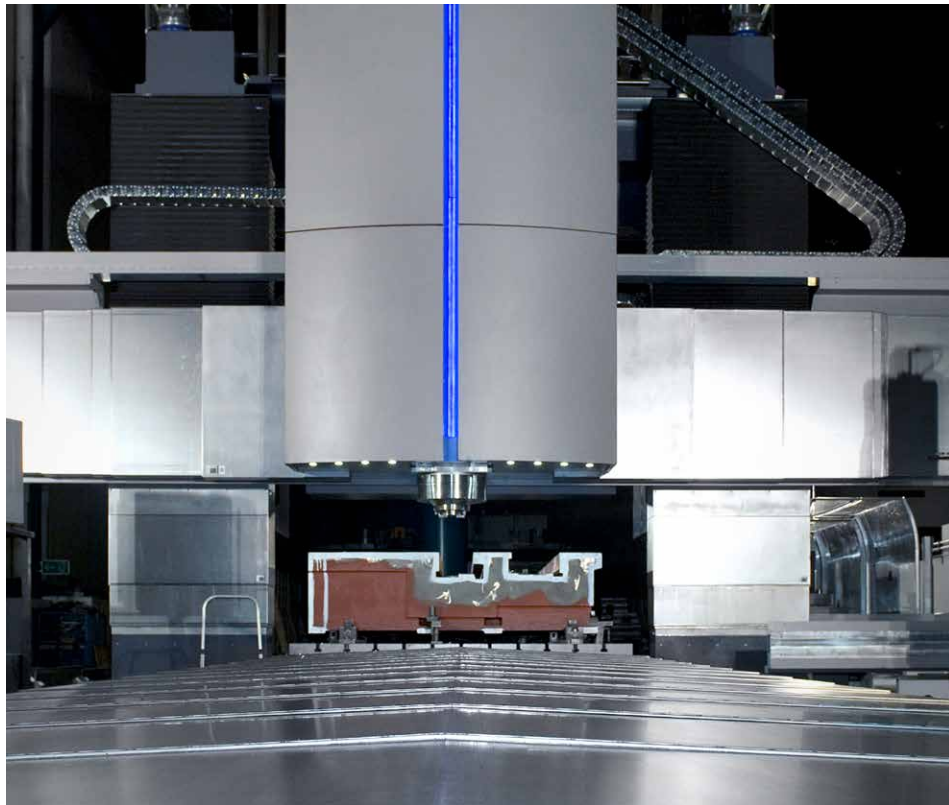
Twelve months is not much time for the design and manufacture of a customized heavy-duty machine tool, but Heiner Wemhöner plans to put the ProfiMill in operation at a new production building that is part of an expansion of his plant in Herford, Germany. Wemhöner Surface Technologies manufactures machines for surface finishing of wood material. Based in Herford, the center of the German furniture industry, and with a production unit near Shanghai in China, the machine manufacturer is placed in a perfect strategic location and is very successful.

The ProfiMill 6500 with a clearance of 6.5 m between the portal columns, an X-axis with a length of 16 m (longitudinal), a Y-axis with a length of 9.5 m (transverse) and a Z-axis of 2 m (vertical) will be used to manufacture frame panels, press tables and other machine components. The workpieces to be machined vary in terms of dimensions, which demands a flexible machine concept as well as a very high process reliability. The customized ProfiMill in gantry design has a set-up area of 15 m × 5.5 m on the floor plate and permits free access to load and unload the workpieces.

One of the main strengths of the ProfiMill range is its adaptability to individual tasks. The ProfiMill for Wemhöner has been equipped with additional components and technology for this purpose: four set-up tables, three spindle units with an automatic serving system, one of these a universal spindle unit for five-axis machining, an automatic rack-type tool changer, special exhausting technology, workpiece and tool measuring technology and a video device that supports the operator in safely monitoring the processes. In just one year’s time, the ProfiMill will make a significant contribution to the highly efficient production of wood processing machines at the new production facility of Wemhöner Surface Technologies.

Olaf Schütz

More Than 200 Heavy-Duty Machine Tools Sold in 20 Years: The Story of Success of the Beijing Representative Office – Interview with Stefan Elze



Introduced to the Chinese market in 2010: the ProfiMill, an unprecedented success in the history of the company

45 years ago, the history of diplomatic relations between Germany and China began. In the late 1980s, it already became clear that China would become a very important market for German machine tool manufacturers. Far-sightedly, a representative office was founded in Beijing in 1989. Stefan Elze has headed the office since 1997 – for 20 years this November. Today, the office is also responsible for the customers of UnionChemnitz. Based in the fifth floor of the Landmark Tower in Beijing's German Centre, Stefan Elze and his team of Chinese staff serve customers all over China.

WaldrichSiegen Journal: China is a huge market, not just economically speaking, but also geographically. Long-term partnerships, trust and respect are of great importance here. How do you stay close to your customers?

Stefan Elze: Firstly, our own Chinese staff is of great importance. Secondly, our location in the capital city Beijing guarantees vicinity to the authorities and many talks with our customers used to take place here, too. Travelling took great effort 20 years ago. This has changed, though. The infrastructure in China, particularly with regard to new roads, the gigantic, fast railway system and the airports, has developed tremendously. Today, we can reach almost every corner of the country by plane or train – and we have to! Me and my employees travel a lot and take care of customers even in the most remote provinces.

How has the country changed in the past 20 years from your point-of-view?

The society has become more cosmopolitan and the Chinese have become more self-confident. This is also due to China's growing influence in world politics. Undoubtedly, major events such as the Summer Olympics 2008 in Beijing and the Expo 2010 in Shanghai have contributed to that. The "One Belt, One Road" initiative will hopefully open up the country even further.

Foreign Representation of the University of Siegen at the Beijing Representative Office

Business relations are not the only ones to be intensified between Germany and China. In May 2009, Christoph Thoma, CEO of the HerkulesGroup, provided a room at the premises of the Beijing Representative Office for the University of Siegen, to be used as an information office and representation center. Ms. Xu Rong, who heads the office, pools the various activities of the University of Siegen in this office and continuously works on expanding the amicable relationships, cooperations and partnerships with students, scientists and universities in China.

Has the Beijing Representative Office developed as quickly?

We were successful from the beginning! Our office is well known among the numerous customers and prospective customers in China. Since the office exists, our German companies have sold much more than 200 machine tools in China. Modernizations of grinding and milling machines and countless spare parts add to this number. WaldrichSiegen is particularly strong on the Chinese market. Roll grinders, EDT machines, lathes or milling machines – all machine types are in great demand here. Besides the excellent quality of our products, this success is also due to our Chinese employees. Our customers appreciate local, direct contacts and the fact that we take care of various issues right away. There are no language problems and questions are answered promptly. You can only be successful if you guarantee intensive, continuous, personal contact with your customers. My motto is "Business is done between people, not between companies."

My motto is:

"Business is done between people, not between companies."

– Stefan Elze (General Manager Beijing Representative Office)



The team at the Beijing Representative Office: Chen Xi (Administration), Ren Xuegui (Sales Manager), Stefan Elze (General Manager), Aaron Li (Head of Sales China) and Chen Rongbin (Sales Manager)

How does this strategy pay off? Is there a particularly memorable project you can recount?

One of the most interesting and successful projects was "Shougang Jingtang" in 2008. The company Shougang Iron & Steel ordered 13 WaldrichSiegen grinders and EDT machines in total for its new hot and cold rolling mills in Caofeidian. That was one of the biggest single orders that we had received in China so far – and at the same time, I recollect that the negotiations were always fair and amicable. There were and are also many large and, from a technological point-of-view, interesting projects involving ProfiMills, which WaldrichSiegen has been selling here since 2010. The ProfiMill has gained an excellent market position in China. In spring 2017, we have founded a new service center for milling machines and lathes in Shanghai together with Hudong Heavy Machinery Co., Ltd., the Hudong-WaldrichSiegen Repairing Maintenance Center.

How do you think the Chinese market for heavy-duty machine tools is going to develop in the next couple of years?

I expect a stable, if in the long-term slightly lower demand compared to the last few years. The Chinese market is huge and the need for investment goods is enormous. Our product range is broad and expandable, so there will still be a significant number of promising projects. 20 years ago, we almost exclusively sold to state companies. Today, the number of privately-owned companies that import heavy-duty machines is growing in China, too. This is the case particularly with heavy-duty machines by WaldrichSiegen and boring mills by UnionChemnitz. In the late 1990s, we sold our roll grinders and EDT machines almost exclusively to the steel industry. Today, WaldrichSiegen and UnionChemnitz sell milling machines, lathes and boring mills in particular to many different industries, too, such as the heavy industry, the power generation industry, the mining and shipbuilding industries, heavy-duty machine tool manufacturers and many more. We meet people from all sorts of business areas with different jobs and positions all over China – a machine operator, or the chairman of a company with several ten thousand employees. The market has become larger, more complex and more diverse and therefore more interesting – an exciting challenge for the future.

Individual drive solutions by RSGetriebe

Special Gearboxes Made within the Company Group



Sister company RSGetriebe develops tailor-made drive solutions for WaldrichSiegen

Customized machine tools need customized gearboxes. Here, WaldrichSiegen is one step ahead of its competitors. Instead of purchasing gearboxes from external suppliers, WaldrichSiegen cooperates with its sister company RSGetriebe. The customer advantage: each gearbox is designed and manufactured in Germany within the company group and is perfectly adapted to each specific application.

“A great vertical range of manufacture is essential for the manufacture of world-leading machine tools. When it comes to building our gearboxes, we closely cooperate with our own group expert RSGetriebe,” says Marco Tannert, President of WaldrichSiegen. The smooth exchange of technical data and requirements is not the only aspect that is of major importance here. The key to success, according to RSGetriebe’s President Thorsten Mehlhorn, is keeping communication channels short. “We use a special enquiry template to optimize the cooperation with regard to technical data. We always make sure that we use gearboxes that have already been applied, as we keep a strict focus on the cost-effectiveness of the solution for our customers. Exact fine-tuning concerning the assembly and connection takes place via exchange of 3D data. The great experience of our engineers is essential here – and the excellent communication between WaldrichSiegen and RSGetriebe. The products, that is to say the gearboxes, are therefore ideally adapted to their respective purposes, but nevertheless offer flexible applicability in the different machine types.” In the past five years alone, RSGetriebe has successfully developed and manufactured more than 90 special-purpose gearboxes for WaldrichSiegen.

Customer event: presentations, live machining demonstrations and expert discussions

Turning and Milling Days at WaldrichSiegen Complete Success

Presentations by the WaldrichSiegen experts in metal machining, live machining demonstrations on the shop floor and expert discussions were the main program items at the Turning and Milling Days at WaldrichSiegen on June 27-28. The event was a complete success both for the organizer and the guests, who came from all over Europe.

Many curious visitors were gathered around the machines on WaldrichSiegen’s shop floor, some of them recent product innovations, to witness their performances. In addition to live machining demonstrations, the guests were invited to inspect milling machines and lathes for customers in different stages of construction, for example the ProfiMill 1 for the Korean customer STX Engine.

„The presentations were informative and gave an overview of the current state of technology,” said a visitor. “I liked the practical part in the afternoon best. Different machines were demonstrated, one of them a portal mill with the new ProfiMill 1 milling unit.”

UnionChemnitz, a sister company of WaldrichSiegen, also presented its boring and milling machines and travelling column mills, and Ingersoll Werkzeuge presented its tool range.



Visitors of the Turning and Milling Days witness the live demonstration of a ProfiMill



Ralf Tschersche, Mechanical Engineering Manager (l.) and Design Engineer Jan-Philipp Stöckermann (“Die Crash Test Dummies”)

MHV International defends Kart Trophy title

For the 17th time, employees of all German companies of the HerkulesGroup met in Siegen to take part in the annual Kart Trophy – for the second time in a row, team MHV International with business engineering student worker Maximilian Bernau, Sales Manager Spare Parts Oliver Klein, and Vice President Sales Guido Matarazzo won the trophy with 334 laps in four hours.

WaldrichSiegen was represented by two teams: the “Sejerländer Bulldozer”, who came third (background right in the picture), and the “Crash Test Dummies” (picture). The darts tournament, which took place for the first time, was also received favorably by the guests and featured many exciting duels. Timo Müller, who had initiated the tournament, was the winner.

Paper for South East Asia Iron and Steel Institute (SEAISI)

The 2017 SEAISI Conference & Exhibition was successfully held in Singapore from 22 to 25 May 2017. The event was well attended by some 500 delegates from 30 countries across the globe. As usual, WaldrichSiegen attended the conference and presented a paper with the title “Cost effective roll machining – example of purchasing a roll grinder by analysis of total cost of ownership (TCO)”.

Mike Nitschke

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Werkzeugmaschinen GmbH
Daimlerstr. 24 · 57299 Burbach
Germany

T: +49 (0) 2736 493-02
F: +49 (0) 2736 493-559

Responsible:
HerkulesGroup
Corporate Communications

waldrichsiegen.com