

Compact machines, modern design: our presence at the EMO

TM 125 Monolith™ and
ProfiMill *compact* at a glance

Presentation of the trade fair display
Precise technology meets
innovative booth design

Follow-up order
WaldrichSiegen produces the sixth
ProfiMill for the Weichai Group

First sale in America
First TM 125 Monolith™
is sold in America



High precision in compact machines: TM 125 and ProfiMill compact

Dear Readers,

“Smart technologies driving tomorrow’s production” is the motto of the EMO 2019. Once again this year, UnionChemnitz and WaldrichSiegen will participate in the world’s leading trade fair for metalworking. Today, the trend in large machine tools is increasingly moving towards more compact variants which can have the flexibility to adapt to customer requirements.

With the TM 125 Monolith™ and the ProfiMill compact, we are focusing on two machines that are tailored precisely to meet the needs of our customers. Both offer high performance and precision in a compact

design. We are pleased to present to you more details about our product portfolio at the fair. We would like to welcome you personally to our booth to demonstrate the advantages of our products.

See you soon in Hanover!

Marco Tannert (President & COO WaldrichSiegen)
Klaus Engeland (Procurator UnionChemnitz)

EMO 2019 – Fair presence

WaldrichSiegen and UnionChemnitz will be on display at the world's leading trade fair for metalworking

WaldrichSiegen and UnionChemnitz will be on display at booth B77 in hall 13 at the EMO 2019. At the world’s leading trade fair for metalworking and machine tools, the focus is on the precision and technology of both companies. Through the TM 125 Monolith™ and the ProfiMill compact, WaldrichSiegen and UnionChemnitz will display the highest precision of their products along with their service skills which are paramount in the industry.

UnionChemnitz presents the world’s first compact boring mill with Herkules Meuselwitz Monolith™ design. Abundant insights into the complex technology of the TM 125 are offered. Here, new technology is combined with the highest damping properties of the Monolith™ machine bed which will be showcased at the exhibition.

WaldrichSiegen shows the advantages of the ProfiMill compact, the portal milling machine from the established ProfiMill series. The compact design combines all the sophisticated highlights of a large portal milling machine – such as the completely hydrostatic guideways and the Masterhead interface – within the ProfiMill compact.



According to the EMO motto “Smart technologies driving tomorrow’s production”, both companies are combining “compact” technologies and ideas with current customer demands, thus working on a future-oriented production.

In addition to the exhibit, UnionChemnitz and WaldrichSiegen will also draw attention to the exhibition booth with innovative ideas and techniques. An LED wall showing the product portfolio of the HerkulesGroup lures all interested visitors to the common booth. Customers can introduce themselves to the advantages of the ProfiMill *compact* through various detailed views, while the TM 125 is elaborately staged over the Monolith™ bed with various video sequences.

Flowing transitions provide a complete overview of the TM 125 – the Monolith™ bed on-site completes the depiction of the innovative machine. Visually completed by light frames, visitors of UnionChemnitz and WaldrichSiegen can expect an astonishing trade fair experience which is worth seeing.

Our staff will advise you professionally on our product portfolios and our services. You are welcome to arrange for a consultation with us in advance or at our booth and to enjoy our catering services. We are looking forward to your visit!



Exhibitions & Events of the HerkulesGroup



Cold / Hot Rolling Day
September 25th and 26th, 2019
Memphis, TN, USA



ALUMINIUM
October 6th to 8th, 2020
Dusseldorf, Germany



AMB
September 15th to 19th, 2020
Stuttgart, Germany

Compact boring mill TM 125: The most important facts at a glance



The TM 125 combines the advantages of a boring mill with the efficiency of a machining center

Technical Data TM 125

Drive power, max. (S6)	34 kW
Torque, max. (S6)	1,660 Nm
Speed range, max.	6,000 min ⁻¹
Column (X-Achse)	2,000 mm
Headstock (Y-Achse)	1,600 mm
Table (Z-Achse)	1,000 mm
Boring spindle (W-Achse)	600 mm

Boring mill and machining center combined

At the EMO 2019, we present the TM 125. Based on the T-series, the compact boring mill impresses with its side stand and boring spindle (125 mm) with longer travels, greater degrees of freedom and a high capacity for table loading. The TM 125 handles medium heavy work-pieces up to 10 t and offers a working range of up to 2,500 × 2,000 × 1,600 mm. The compact boring mill combines the classic boring mill with the characteristics of a machining center, thus offering these advantages to smaller companies without raising the cost and space issues of a normal boring mill.

The Monolith™ construction ensures that the TM 125 is extraordinary. Herkules developed the Monolith™ design patented for roll grinding machines as a foundation-free design. The monolithic machine bed and the technology of the boring mill combine to form a unique compact boring mill. The thermostable and torsion-resistant machine bed is manufactured in a sandwich structure with a welded and ribbed top, fiber-reinforced high-performance mineral concrete and a base plate made of steel and special damping elements. Vibrations are effectively damped and space requirements are reduced. The TM 125 can also be easily relocated thanks to the foundation-free design. A “smart technology” that significantly influences the production of tomorrow with its unique advantages.

Portal milling machine ProfiMill compact: The most important facts at a glance



The ProfiMill compact offers the user reproducible accuracy over the entire machine life

Portal milling machines with highest precision

In terms of precision and performance, the ProfiMill series is unique. Complex large parts are processed efficiently by the ProfiMill portal milling machine. The modular structure offers a larger design spectrum and thus more options for the customer. Hydrostatic guides for high dynamic stiffness and a Masterhead interface for a variety of milling heads stand for flexibility, powerful machining and high efficiency that exceeds demands. All structural components are made of high quality cast iron. This offers the user clear advantages, as high damping, high rigidity and high temperature stability are guaranteed. The modular system enables custom made solutions that are individually adapted to the demands of the customer.

As a little brother of the ProfiMill, the ProfiMill compact assures an excellent price-performance ratio. The fully hydrostatic portal milling machine enables reproducible accuracy over the entire machine life. Perfect for machining small to medium-sized workpieces, the ProfiMill compact offers pass-through widths between 2,500 and 4,000 mm. A compact portal milling machine with the highest precision – the ProfiMill compact from WaldrichSiegen.

Technical Data ProfiMill compact

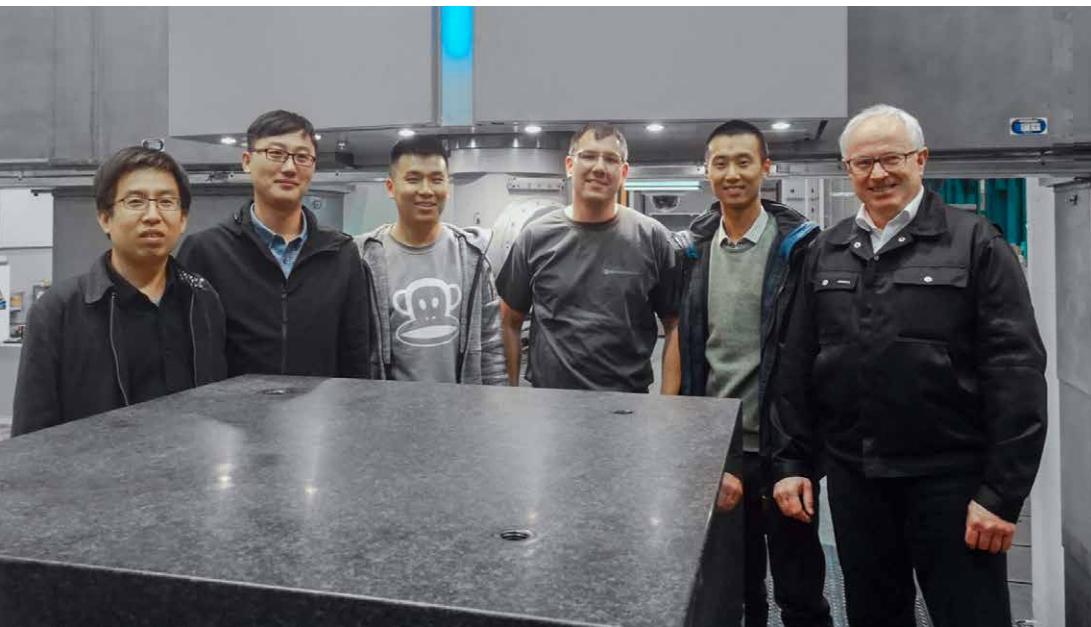
Drive power, max. (S1)	71 kW
Torque, max.	2,750 Nm
Speed range, max.	6,000 min ⁻¹
Table length	4,000 – 6,000 mm*
X-axis	5,000 – 7,000 mm*
Y-axis	3,500 – 5,000 mm
Z-axis	1,500 / 2,000 mm

*extendable in 500 mm steps

Sixth ProfiMill for the Weichai Group



The fully hydrostatic ProfiMill guarantees an almost unlimited service life



Delegation of Weichai Heavy Machinery at the acceptance of the machines in Burbach

Portal milling machines with a common pallet system offer the user efficient machining which saves costs, clamping times and personnel effort. The companies of the Weichai Group use these advantages of the ProfiMill for their production.

Past, Present and Future: in November 2017, the Chinese Company Weichai Power Co., Ltd. ordered two interlinked portal milling machines of the ProfiMill type for their engine production. Since then, the portal milling machines with fully automatic pallet system are in use for the precise and fast machining of engine blocks. Weichai Power is one of the largest producers of small to middle-sized diesel engines and thanks to the pallet transport system it machines large quantities in record time.

Another member of the Weichai Group, the Weichai Heavy Machinery Co., Ltd. placed a subsequent order for two additional portal milling machines. They were shipped in June and will be used for the continued production of diesel engines as well. The precision and speed of the interlinked portal milling machines continue to fascinate: Weichai Power ordered two more ProfiMill machines which are currently assembled in WaldrichSiegen.

The advantages of portal milling machines with pallet system speak for themselves. The specifically developed FMS control (Flexible Manufacturing System) coordinates the pallet transport car which traverses between the two machines. While the machine processes one workpiece, the others are set up simultaneously. WaldrichSiegen offers a seamless processing of products with maximum efficiency without downtime – innovative technology that guarantees highest efficiency.

Powerful Dual PCR 180 for more flexibility

Union Chemnitz received the order for two PCR 180 for a customer in Canada. The machines combine different technologies for nearly unlimited machining options in turning, milling and boring. The two PCR 180 traverse on a 34 m long machine bed with their own CNC control. This allows numerous working areas to optimize the available pro-

cessing time. While the operators do setup, the machine columns run unmanned in their defined working area. In addition to the two columns, the machine has two high-speed turning tables and balancing devices which can be used to machine asymmetric workpieces in turning or turn-milling mode.

The first TM 125 for America

The advantages of the TM 125 Monolith™ fascinate customers around the world – including companies in America. After successful sales in Europe, now the first to be produced for the US market will take place early next year.

The TM 125 not only impressed the company with its technical parameters, but also with its foundation-free installation directly on the production floor. “The customer already uses UnionChemnitz machines at various locations successfully which are primarily used for contract production,” says Stefan Tschersche of UnionChemnitz. “Especially for contract and series manufacturers, the foundation-free installation of the TM 125 offers the possibility of being able to adjust the production process at any time, as the requirements for the machines are constantly changing.” The compact boring mill is constructed according to the needs of the customer and will be delivered with a larger table (1,600 × 2,000 mm) and with all services of the TM 125. Foundation-free and flexible, the compact boring mill meets the challenges of the customer along with the high degree of freedom provided by a boring mill and the efficiency of a machining center.

Contract manufacturers need more and more powerful and flexible machines to stay competitive. UnionChemnitz takes this challenge and develops machine concepts that adapt to every need of the customer.



The TM 125 offers low attrition and high machining quality

Sustainability initiative Blue Competence

High precision machines reduce energy consumption

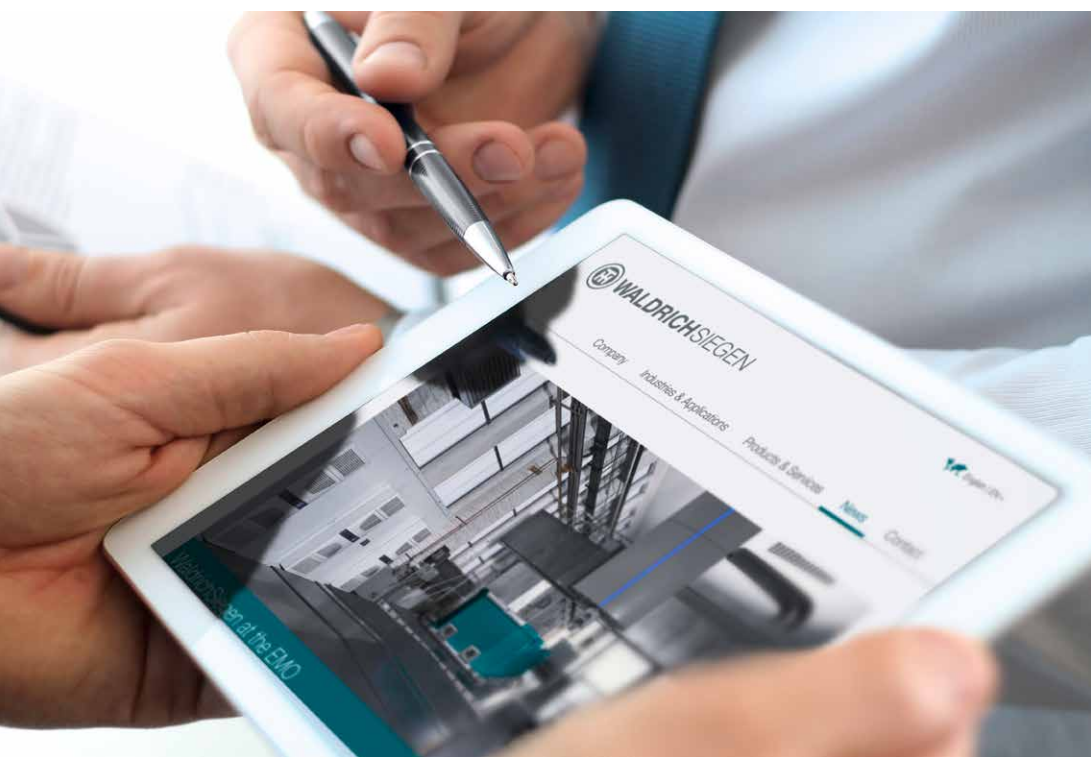
To use resources as sustainable as possible is an issue which concerns the industry again and again. The companies of the HerkulesGroup delegate themselves the mission of creating energy-efficient products.

The machines of the HerkulesGroup are despite their high precision and quality linked to sustainable energy consumption. The companies are partners of the VDMA initiative Blue Competence. Each machine from the companies is unique, because they are produced and designed with specific customer needs in mind. The machine and its individual components are optimized with the finite element method, so that the machine's stiffness and accuracy is increased and the need for electric energy for acceleration processes is permanently reduced.

The hydrostatic guideways of the machine axes are important for energy efficiency as well. The ample damping and the virtually wear-free characteristics (fluid friction only) have a positive effect on energy consumption. A longer machine life and improved process results are the success of this approach. Demand-based optimizations reduce the total energy consumption and lead to a cost advantage for the customer, and therefore, to a competitive advantage for our machines and products as well.

When a machine is working efficiently and produces exact results, time and money can be avoided on post machining. A machine from the HerkulesGroup improves the efficiency significantly and contributes to an environmentally friendly result. Sustainable solutions create a strong future.

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