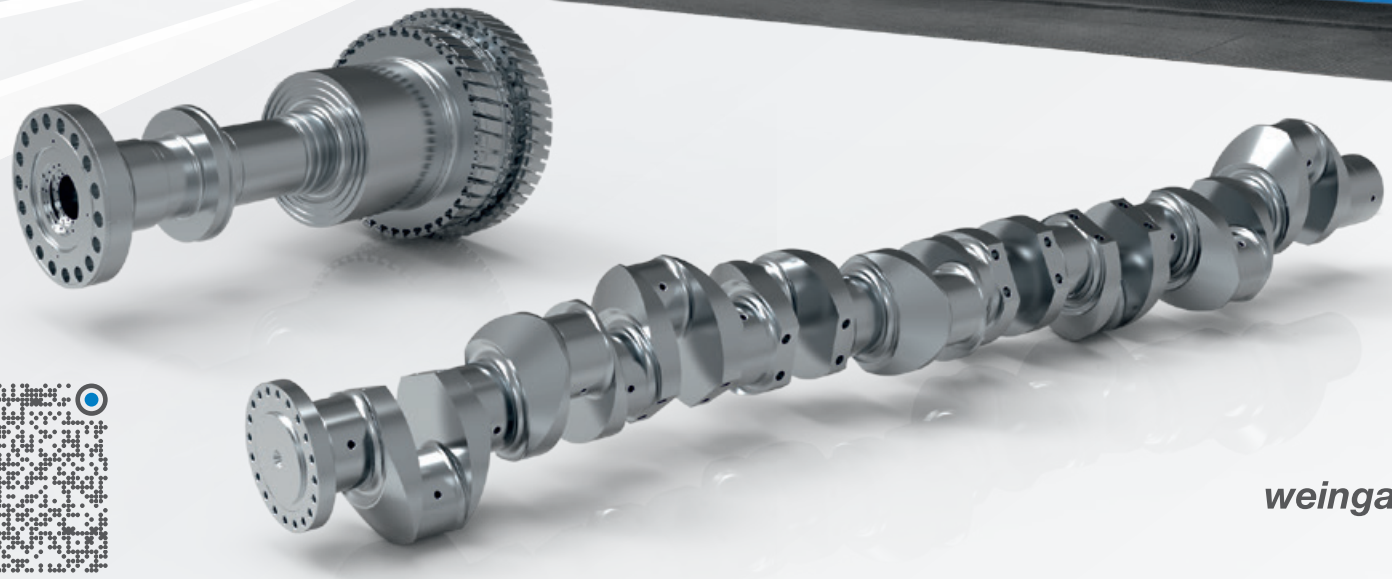
WEINGÄRTNER
MASCHINENBAU

Setting the Standard in **Complete Horizontal Machining.**

EN | 03.2026

mpmc
multi product machining center



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solutions for **RAILWAY INDUSTRY**

solutions for **OIL & GAS INDUSTRY**

solutions for **HEAVY-DUTY MACHINING**

solutions for **PUMP INDUSTRY**

solutions for **RENEWABLE ENERGY**

UNIQUE Customization

The ***mpmc*** is our pride and joy, and our team of highly qualified engineers continually strives to refine and further develop this exceptional machine.

Since its conception, the ***mpmc***, together with its integrated software package, has offered an exceptionally high degree of customization. While it is technically referred to as a series, it is in fact a complete solution, tailor-made to meet your specific and unique requirements. You can be assured of receiving a world-class, high-end machine that fully delivers on the Weingärtner promise.

This remarkable machine consistently sets new standards in complete horizontal machining of complex components, including:

// Injection molding screws
// Extruder screws
// Turbo-generator shafts
// Gas and steam turbine shafts

Precision, efficiency, and versatility are just a few of the key advantages this machine concept has to offer. It enhances workpiece quality while simultaneously reducing production costs.

Machine BASE

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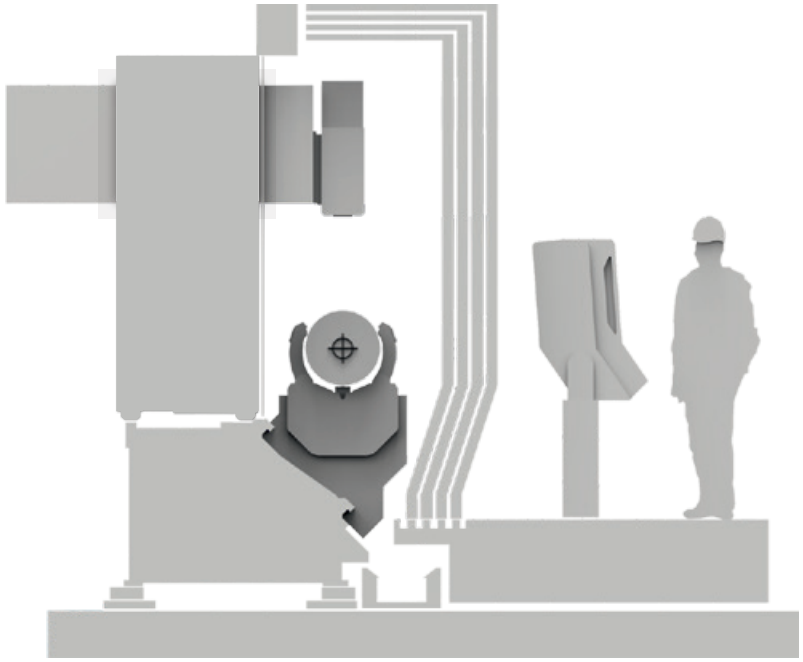
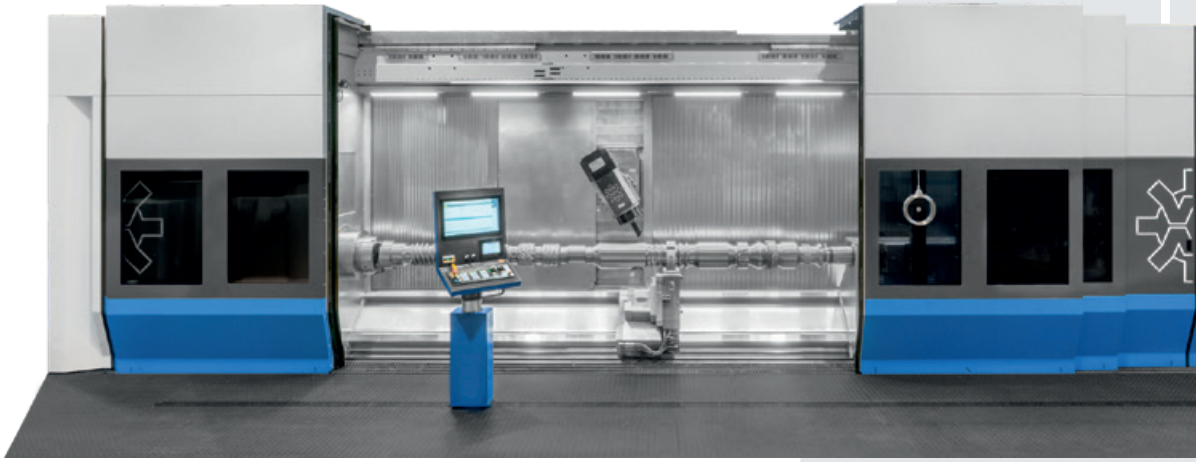
The ***mpmc*** is a modular inclined-bed turning and milling machine designed for efficient chip removal. Its ergonomic layout ensures comfortable and safe operation. The wide machine base, excellent guideway ratio, and optimized guideway configuration provide outstanding stability and effectively prevent vibration during operation, even under extreme cutting conditions.

At Weingärtner, we manufacture our own machine beds in-house, with machining capabilities for components up to 26 meters in length. This vertical integration ensures that all borings, guideways, and critical machining processes are executed precisely to specification, guaranteeing maximum accuracy, consistency, and long-term stability of the machine base.

A Robust & Ergonomic **DESIGN**



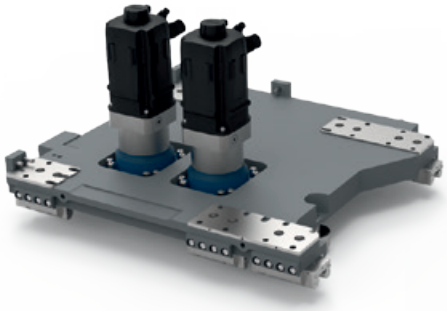


Every major machine component has been developed with stringent safety requirements in mind. Combined with the machine's solid structural design, these features are essential in meeting the ***mpmc***'s high performance demands. The heavy machine bed delivers excellent shock absorption and precision, even when operating under maximum load. All working loads are consistently centered on the machine base, preventing vibrations from being transmitted to critical components.

Thanks to its carefully engineered ergonomic concept, the ***mpmc*** provides a high level of operator comfort. Barrier-free access to the machining area for tool and workpiece inspection is a key prerequisite for minimizing risks and ensuring safe daily operation of the machine.

INNOVATIVE Design

The ***mpmc*** has earned its reputation as an innovative solution provider through a range of carefully integrated features that enable the complete machining of highly complex workpieces. The objective is to achieve higher performance levels and greater accuracy compared to similar machines available on the market. Its efficient operating concept maximizes production output while keeping maintenance requirements and operating costs to a minimum.

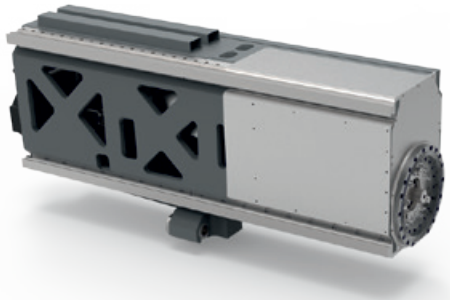


MASTER-SLAVE DRIVE IN B-, C- AND Z-AXIS

A master-slave drive system is implemented on the B-, C-, and Z-axes to ensure maximum positioning accuracy. The Z-axis is driven by a rack-and-pinion system rather than a ball screw spindle. This design significantly reduces service and repair costs while also lowering noise levels during operation.

In the master-slave system:

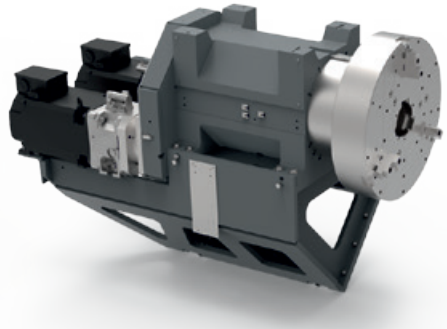
// The master motor defines the exact position
// The slave motor applies a defined counter-torque against the master motor to eliminate backlash in the gearing
// High positioning accuracy is guaranteed
// Overall torque is increased



UNIQUE B-AXIS FOR SWIVELING OF MACHINING HEADS

The B-axis design is based on the proven C-axis concept and incorporates integrated master-slave technology. Two servo motors with high-ratio gearboxes engage a central gear to ensure precise and powerful movement. The in-house developed B-axis clamping mechanism allows infinite indexing of the machining heads at any angular position.

Instead of a conventional Hirth joint indexing system, a hydromechanical clamping mechanism is used. This design also serves as overload protection, preventing damage in the event of a collision. With this advanced B-axis concept, no realignment procedure or mechanical service intervention is required. A high-resolution direct measuring system ensures a positioning accuracy of ±3 arc seconds.



STRONG AND POWERFUL HEADSTOCK

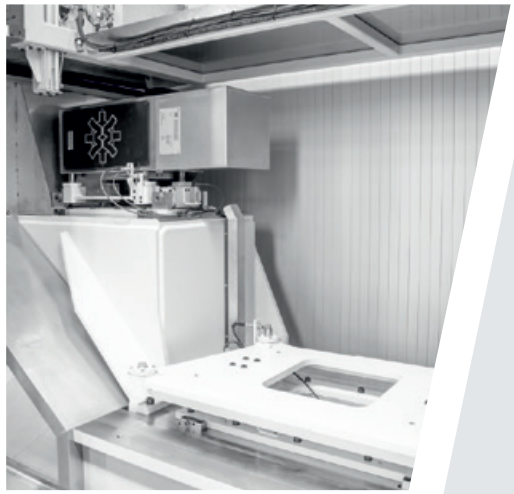
The demanding nature of heavy-duty machining requires robust power combined with absolute precision. The headstock is driven by two powerful AC main spindle motors with an automatic switching gearbox, forming a twin-drive system for both turning and milling operations. Hydraulically actuated power chucks ensure secure and reliable workpiece clamping.

Positioning accuracy of ±3 arc seconds, controlled by a high-resolution direct measuring system, guarantees precise and consistent machining results across all applications.

INTERCHANGEABLE MACHINING HEADS WITH AUTOMATIC PICK-UP SYSTEM

To reduce manufacturing time and costs while maximizing productivity, the ***mpmc*** enables complete machining of a workpiece with a minimal number of setups. It can perform machining operations that would normally require several different machines, making it an exceptionally versatile solution.

Multiple machining heads are stored in a dedicated pickup station and are automatically exchanged using a quick-clamping pick-up system. The appropriate head is selected for the respective machining process, such as HSC milling, bottle boring, trochoidal milling, slot milling, or grinding.



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COUNTER SPINDLE SYSTEM

As the demands on multi-task machining centers continue to increase, minimizing idle times has become essential. The integrated counter-spindle system enables complete machining of a workpiece in a single setup, significantly improving productivity and process efficiency.

SOFT LANDING

The ***mpmc*** series is designed for heavy-duty machining of workpieces weighing up to 60 tons, with turning lengths of up to 17 meters and a swing diameter of up to 2,8 meters. Larger workpiece dimensions can be accommodated on request.

An integrated soft-landing system with prismatic support pads facilitates safe and controlled loading and unloading of large and heavy workpieces, such as work rollers.

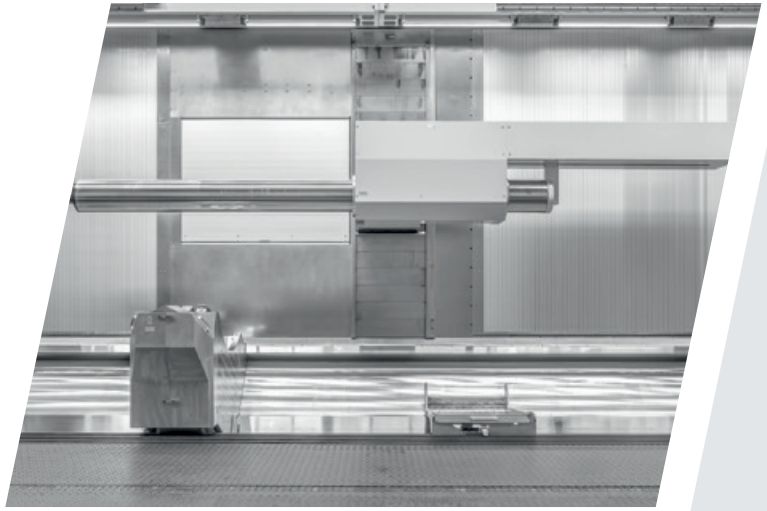
STEADY REST

Upon request, a steady rest solution with CNC-controlled support movements is available for heavy workpieces. Support rollers or hydrostatic support pads can be used alternately on the same steady rest unit. A key advantage of this system is the ability to correct the workpiece center position under full load.

This eliminates the need to lift the workpiece with a crane, adjust the steady rest position, and reload the component, a procedure commonly required on other machines.

BORING BARS AND SPECIAL TOOLING

Storage stations for boring bars and other long or heavy tools are positioned either above the headstock or at the end of the machine bed, behind the tailstock. Depending on the machine size, up to four storage stations can be installed at each location. For applications requiring a larger number of heavy special tools, a separate heavy-duty tool magazine is available.



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multi product machining center

Machine DIMENSIONS

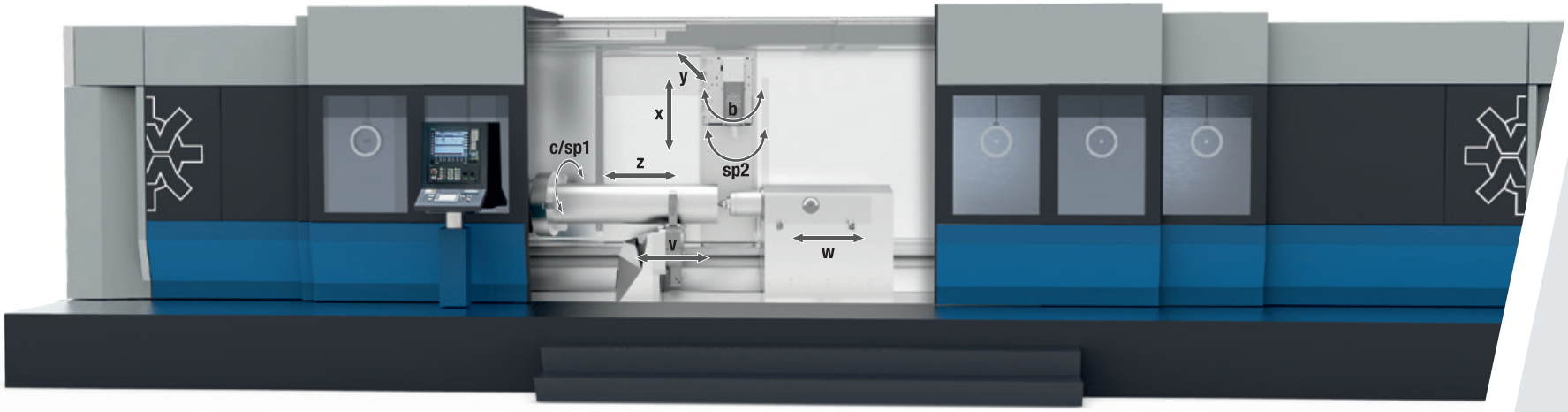
	700 S	900 L/S	1000 S	1200 L	1300 L/S	1400 S	1800 L	2000 L/S	2800 L
Workpiece dimensions									
Swing over bed & slide (mm)	700	900	1000	1200	1300	1400	1800	2000	2800
Weight between chuck & tailstock (kg)	3000*	3000/8000*	8000/16000*	3000/8000*	8000/16000/30000*	16000/30000/60000*	8000/16000*	16000/30000/60000*	16000/30000*
Main spindle									
Spindle head DIN 55026	A11	A11 / A15	A15 / A20	A11 / A15	A15 / A20	A20 / A28	A15 / A20	A20 / A28	A20 / A28
Tool spindle									
Tool interface	C6/C8/HSK100	C6/C8/HSK100	C6/C8/HSK100	C6/C8/HSK100	C6/C8/HSK100	C10/HSK125	C6/C8/HSK100	C10/HSK125	C10/HSK125
Swivel axis									
Swivel range	±110°	±110°	±110°	±110°	±110°	±110°	±110°	±110°	±110°
X-Axis: Vertical slide									
Total travel distance (mm)	900 / 1000 / 1150	900 / 1000 / 1150	1100 / 1250 / 1500	900 / 1000 / 1150	1100 / 1250 / 1500	1500 / 1800 / 2200	1100 / 1250 / 1500	1500 / 1800 / 2200	1500 / 1800 / 2200
Above workpiece center (mm)	850 / 950 / 1100	850 / 950 / 1100	1000 / 1150 / 1400	850 / 950 / 1100	1000 / 1150 / 1400	1350 / 1650 / 2050	1000 / 1150 / 1400	1350 / 1650 / 2050	1350 / 1650 / 2050
Below workpiece center (mm)	50	50	100	50	100	150	100	150	150
Rapid feed (m/min)	30	30	25	30	25	20	25	20	20
Y-Axis: Horizontal slide									
Travel distance (mm)	-175 / +175 (+375)	-275 / +275 (+475)	-325 / +325 (+625)	-425 / +275	-475 / +475 (+725)	-500 / +500	-725 / +475	-800 / +800	-1200 / +400
Rapid feed (m/min)	30	30	25	30	25	20	25	20	20
Z-Axis: Longitudinal slide									
Rapid feed (m/min)	40	40	40	40	40	30	40	30	30
Control	**SINUMERIK ONE**	**SINUMERIK ONE**	**SINUMERIK ONE**	**SINUMERIK ONE**	**SINUMERIK ONE**	**SINUMERIK ONE**	**SINUMERIK ONE**	**SINUMERIK ONE**	**SINUMERIK ONE**

* Special sizes / weights available on request.

Axes

Dimensions & lengths are tailored to INDIVIDUAL CUSTOMER REQUIREMENTS

X-axis	=	Vertical slide
Y-axis	=	Horizontal slide
Z-axis	=	Longitudinal slide
V-axis	=	Steady rest slide
W-axis	=	Tailstock slide
C-axis	=	Milling mode
SP1-axis	=	Turning mode
B-axis	=	Swiveling drive
SP2-axis	=	Tool drive



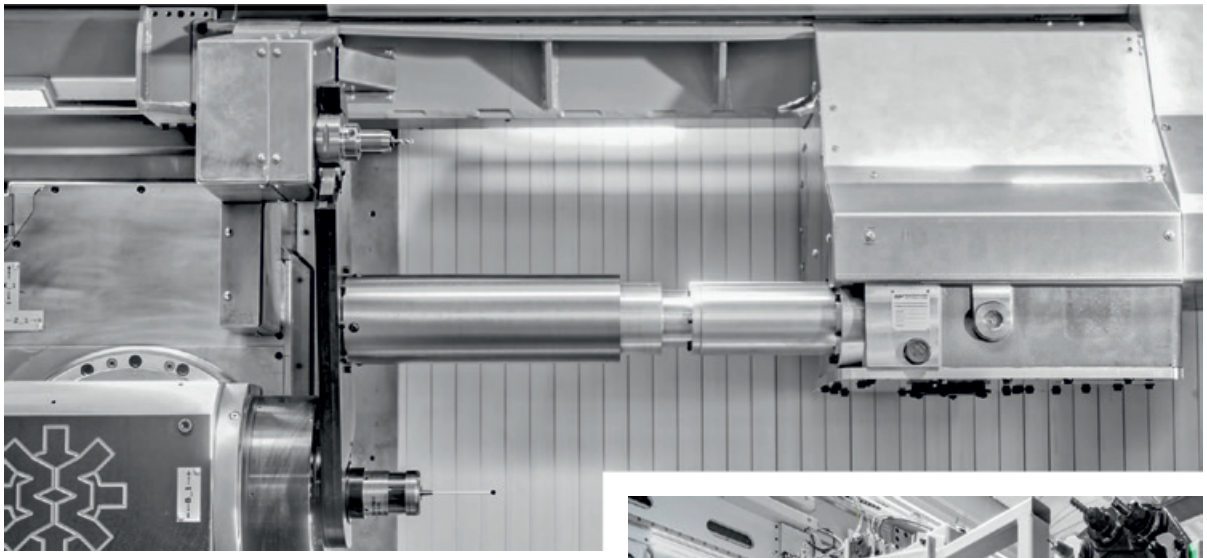
Tool Handling and Workpiece Automation

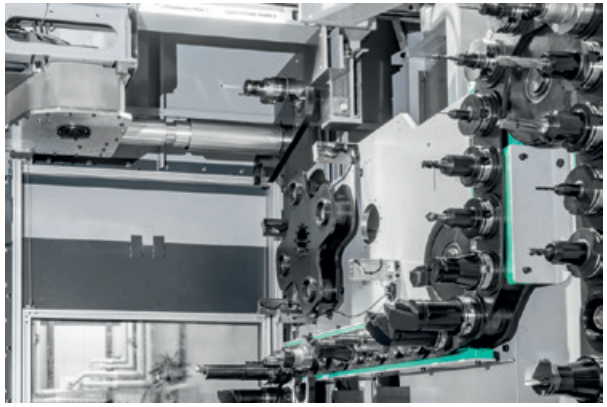
TOOL HANDLING

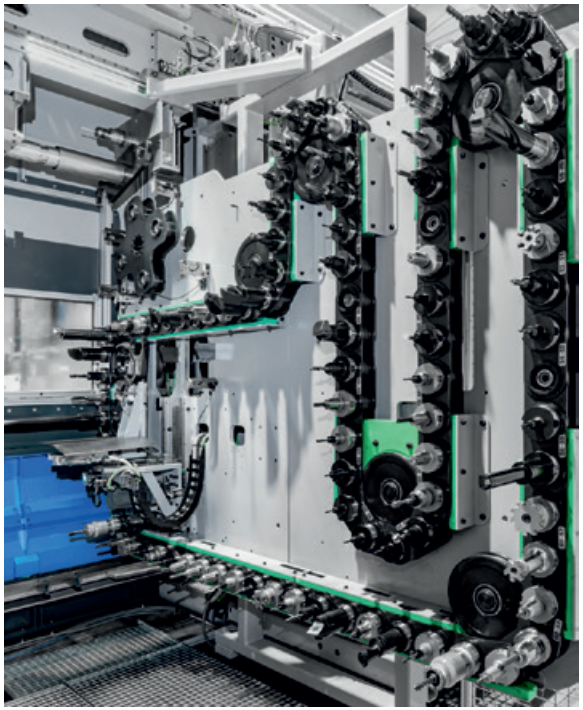
Staying at the forefront of machine tool technology requires the implementation of intelligent automation solutions aimed at increasing performance and efficiency. Optimized processes demand tailor-made concepts that streamline workflows and enhance productivity. The ***mpmc*** can be customized to meet specific production objectives.

For basic applications, a conventional chain magazine is used in combination with an independent shuttle system, which can be positioned at either the headstock or tailstock end of the machine base. Tool changes can be performed at any longitudinal position along the Z-axis, even during machining. All required tools are made available simultaneously, ensuring the shortest possible changeover times.

More complex applications require advanced handling solutions for storing and supplying prearranged tool sets. In such cases, tool handling is fully automated and integrated with an external tool delivery feeder system.

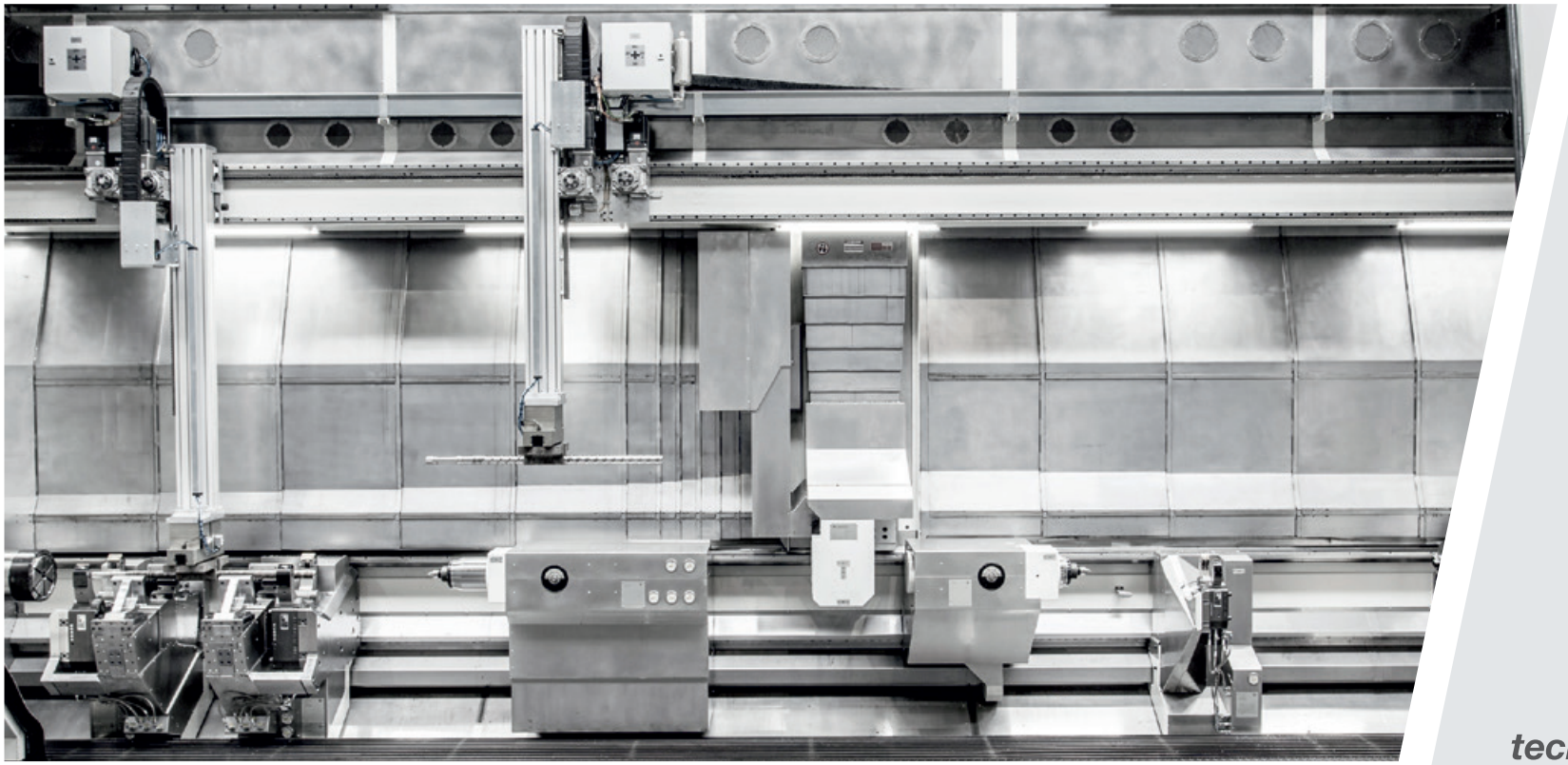






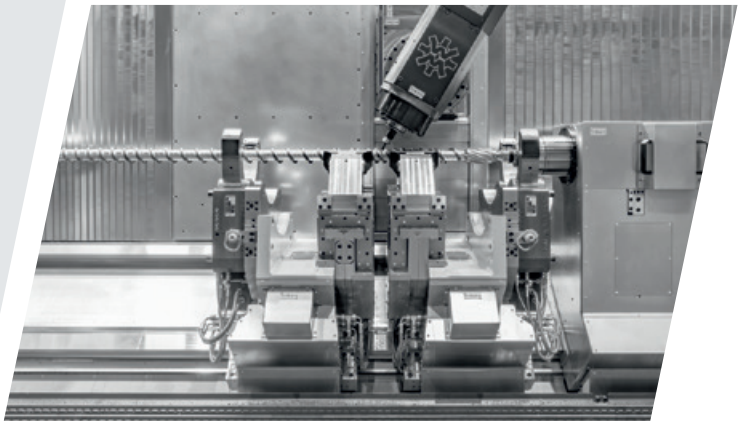
AUTOMATED SOLUTIONS

In addition to tool automation, workpiece handling can also be automated by connecting the mpmc to an external delivery feeder system. If required, an Automated Guided Vehicle (AGV) can be implemented for the safe handling and storage of workpieces. All automation solutions comply with international safety standards and are fully Industry 4.0 enabled.



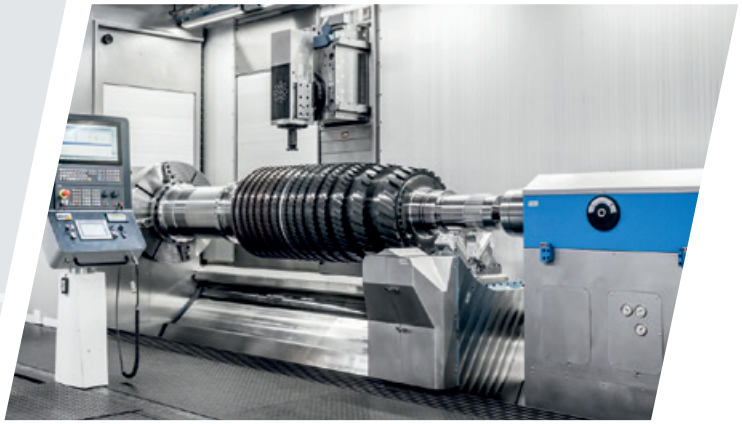
ONE MACHINE for every application

Beyond its precision, adaptability, and efficiency, the ***mpmc*** excels in handling a wide range of demanding machining applications. These include, among others, the production of injection molding and extruder screws, as well as gas and steam turbine shafts.



INJECTION MOLDING AND EXTRUDER SCREWS

Thanks to its exceptional versatility, the ***mpmc*** is ideally suited for the production of injection molding screws, extruder screws, and their corresponding cylinders. It enables complete machining of a workpiece with a minimal number of setups, from raw material to finished component, regardless of whether the material is nitriding steel, powder-metallurgical steel, or hard-plated.



GAS AND STEAM TURBINE SHAFTS

To meet the demanding requirements of the energy sector, the ***mpmc*** is equipped as standard with a unique, world-class hydrostatic steady rest solution. This technology opens up entirely new possibilities for the complete machining of gas and steam turbine shafts.

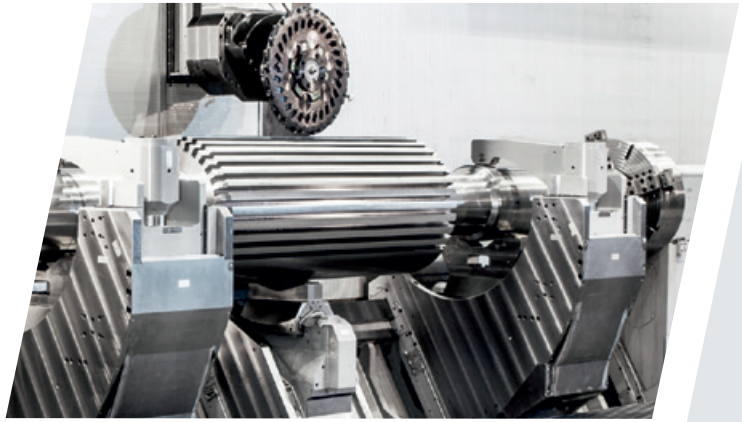
Machining processes include turning, milling, dovetail groove and fir-tree profile milling, deep-hole drilling, honing, in-process measuring, and deep grooving.

MULTIPLE MACHINING OPTIONS

The flexible and comprehensive machine concept of the ***mpmc*** covers all relevant production processes in metal-cutting technology. It enables precise and efficient machining of highly complex workpieces. Additional available technologies include: **ROLLER BURNISHING // DEEP ROLLING // BROACHING // POLISHING // GRINDING**

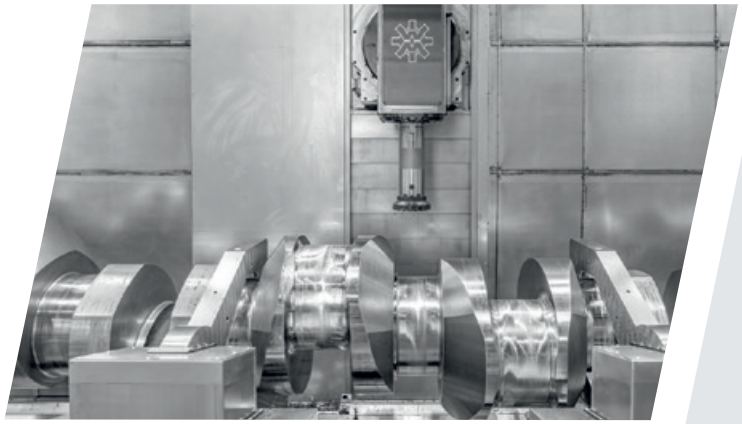
TURBO GENERATOR SHAFTS

The high-performance disk milling head enables fast and precise machining of entire rotors without interruption. Fully integrated into the machine, it works in combination with the standard turning and milling head, allowing the ***mpmc*** to perform all required machining operations, including turning, milling, slotting, drilling, and honing.



CRANKSHAFTS

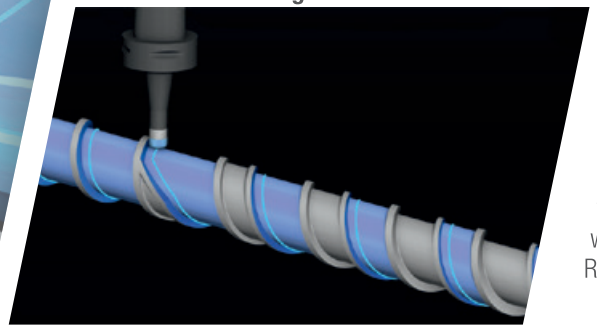
A particularly rigid and powerful milling head, combined with specially developed machining cycles and an application-specific steady rest design, enables cost-effective and highly accurate complete machining of large crankshafts.



In-House Software

SOFTWARE made by Weingärtner

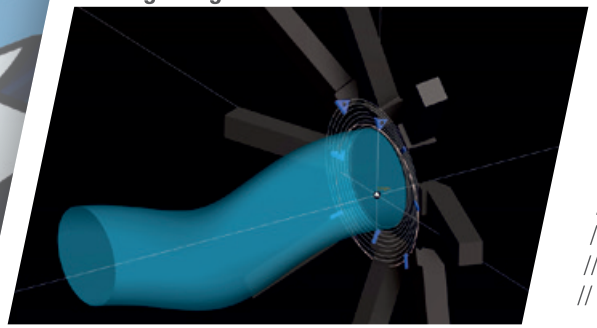
CAM / Extruder Designer



weinCAD® is a sophisticated, user-friendly programming and production software designed for intuitive and efficient operation of the ***mpmc***. Optional modules such as **WMDS®** (Weingärtner Machine Diagnostic System) and an emulation module ensure ease of use and maximum machine availability. The software is continuously updated and made available online.

The in-house developed CAD/CAM software, combined with process engineering and machining technology, is precisely tailored to specific application requirements. The **weinCAD® Screw Designer** was developed to address the particular challenges involved in the production of helical components. Reference-based module dependencies ensure smooth workflows and significant time savings.

Peeling Designer

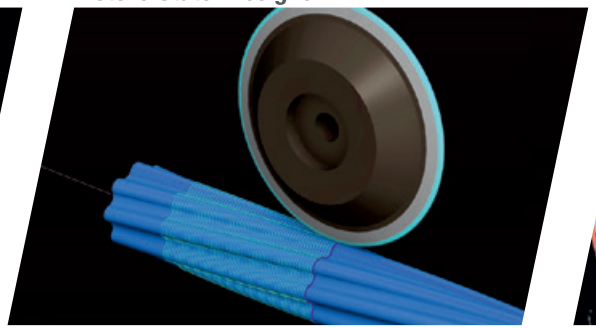


Key functionalities include:

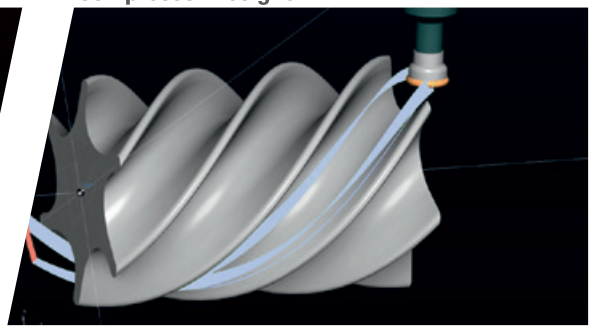
// Calculations
// Geometry mapping
// Volume calculations
// Simulations
// Additional modules
// Analysis modules
// Throughput calculations
// Geometry generation

Gear Designer

Rotor / Stator Designer



Compressor Designer



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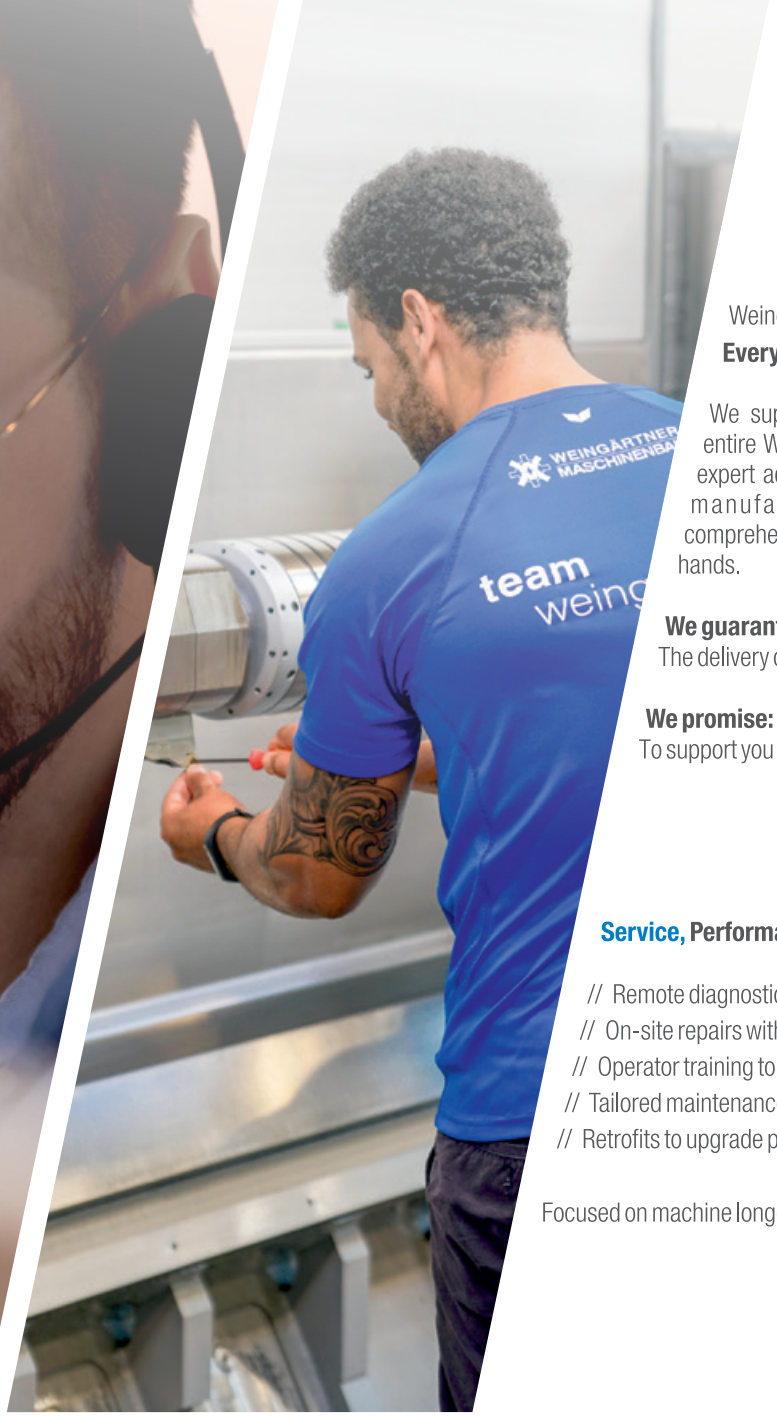
customer service



Weingärtner is a supplier of complete solutions.
Everything from a single source.

We support our customers worldwide throughout the entire Weingärtner journey: from initial consultation and expert advice, through layout, design, and simulation, to manufacturing, delivery, commissioning, and comprehensive after-sales service. You are always in good hands.

We guarantee:
The delivery of world-class, tailor-made machines.

We promise:
To support you as a reliable partner, throughout and beyond.

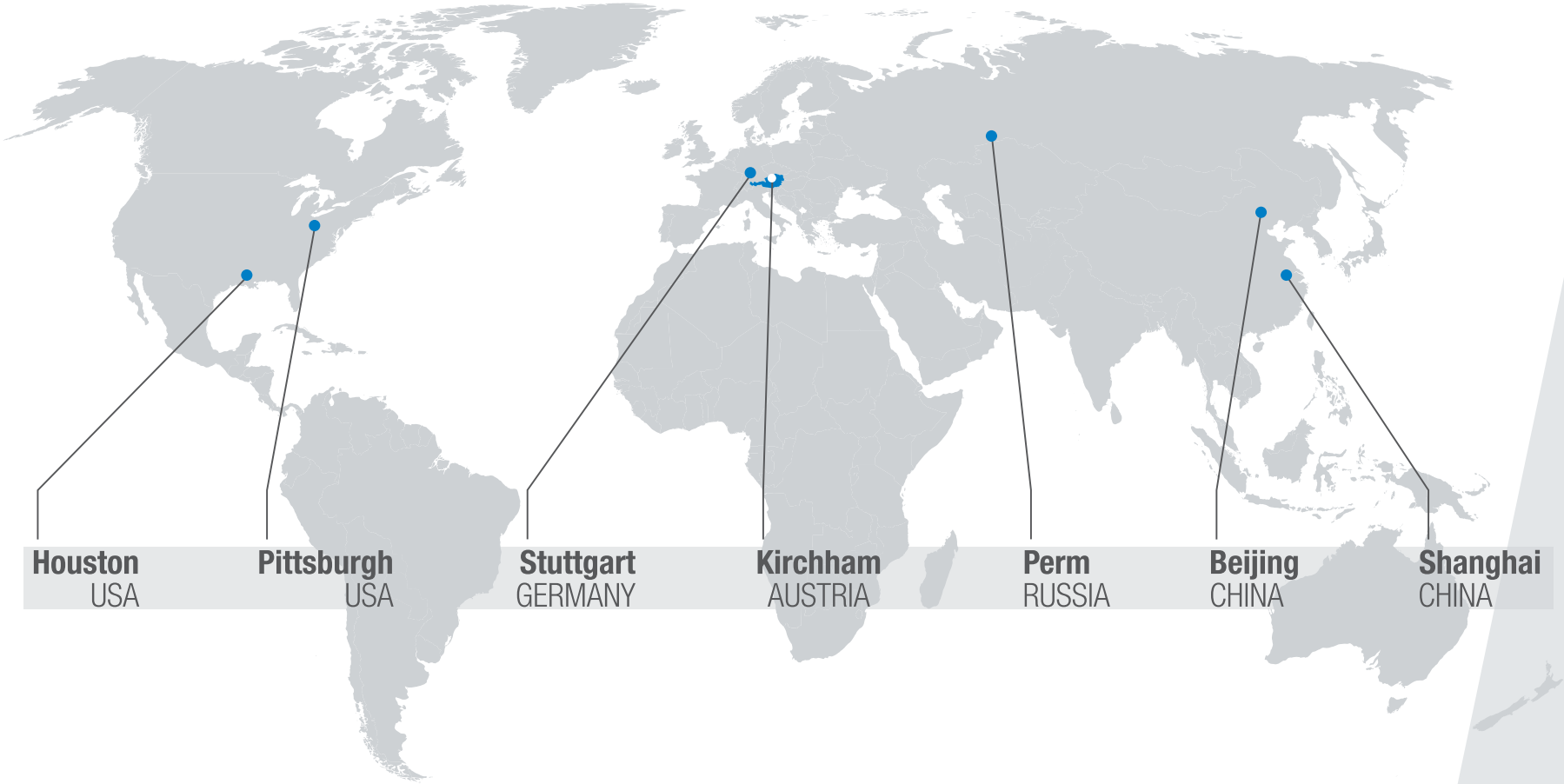
Service, Performance You Can Rely On

// Remote diagnostics & real-time assistance for fast solutions
// On-site repairs with original parts & skilled technicians
// Operator training to ensure safe, efficient machine use
// Tailored maintenance programs for maximum uptime
// Retrofits to upgrade performance & integrate new tech

Focused on machine longevity, productivity, and **peace of mind.**

Support. Maintenance. Expertise.

GLOBAL FOOTPRINT Sales & Service



WEINGÄRTNER MASCHINENBAU GMBH

Visionary leadership has shaped the Weingärtner brand into a globally trusted name in machine tool technology. Founded in 1965, Weingärtner employs over 600 people worldwide, while its roots remain firmly anchored in Austria. As part of the Weingärtner Group, the company is a leading technology solution supplier to industries including energy, oil and gas, plastics, and heavy engineering.

Beyond our strong commitment to innovation and customer focus, we place great value on the principles that have shaped our long-term success. Loyalty to customers and employees, openness to pioneering ideas, and respect for our origins remain at the core of our philosophy. With this mindset, we actively embrace social responsibility, supporting the well-being of our surrounding communities and giving back to the society that has accompanied and sustained our growth over many years.

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