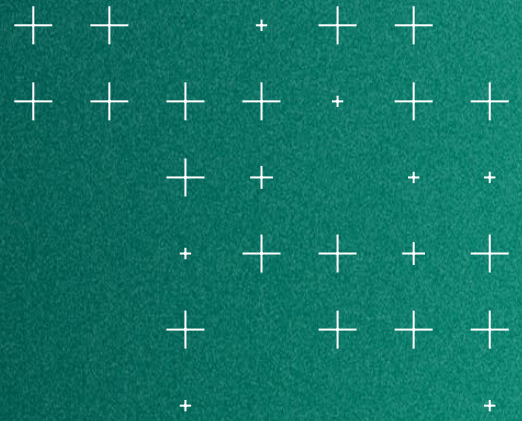




ULTRASONIC
TECHNOLOGY
GROUP
a schunk company



Servoelectric ultrasonic series machines MS sonxTOP

Next-generation ultrasonic welding
technology. Precise. Fast. Flexible.



No bending

The patented MS paralliCer technology ensures maximum process reliability.

Precision

Our specially developed MS preciSer servo drive ensures unparalleled precision.



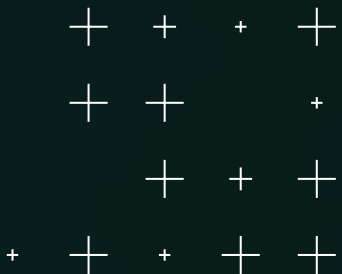
Process monitoring

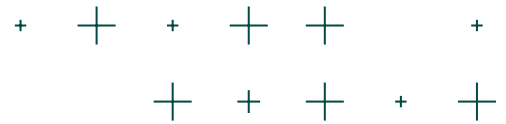
Comprehensive process monitoring including easy reading and storage of parameters.



All in One

Welding and testing with just one machine thanks to integrated tensile testing.





The perfect choice for you

Our series machine offers precise processes and maximum efficiency at minimal cost.

The **servoelectric ultrasonic series machines** of the **MS sonxTOP** series stand for reproducible quality, stable processes, and sustainable efficiency. Developed and manufactured in Germany, they meet the most demanding requirements of modern industrial applications – from automotive and medical technology to packaging, textiles, and consumer goods.

Precision that is noticeably better

At the core of the MS sonxTOP series is the **MS preciSer servo-drive**. It enables exceptional movement and control accuracy and ensures maximum weld seam strength and reproducible results – even with sensitive material combinations.

Productivity without compromise

Servoelectric and dynamically controlled motion profiles **reduce cycle times by up to 25 %** compared to pneumatic ultrasonic systems. At the same time, precise force, displacement, and speed control increases the good part rate in series applications to up to 99.6 %.

Sustainability with economic impact

The fully electric drive concept does not require any compressed air. This significantly reduces operating costs and energy consumption and cuts **CO₂ emissions by up to 80 %**. At the same time, the machines are suitable for clean rooms up to **ISO class 5**.

Technological lead

MS sonxTOP combines **generators in the frequency classes 20 kHz, 30 kHz, 35 kHz, and 40 kHz**, the MS preciSer servo drive, MS paralliCer technology, and **GMP-compliant traceability** with Industry 4.0 connectivity – for maximum process flexibility and maximum series reliability. Intuitive touch operation in 15 languages and **comprehensive process monitoring** increase productivity and minimize downtime.



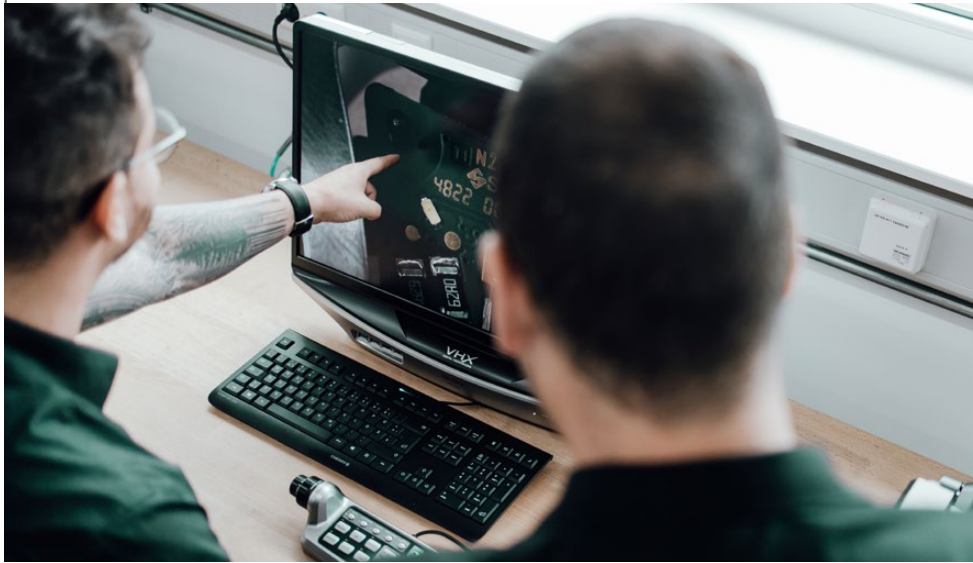
A

Center of expertise for ultrasonic processes

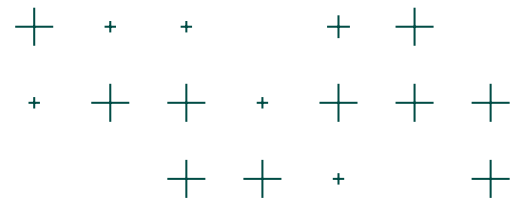
Thoroughly developed, comprehensively tested, and safely transferred to series production.



B



C



A | Reliable in series production

Testing, analyzing, optimizing – all in one place.

B | Maximum depth of detail

Microtome cuts for precise analysis of the seam structure.

C | Resiliently tested

Tensile tests provide reliable information about strength.

In our in-house application laboratories, a team of ultrasonic experts and application engineers develops customized solutions for your welding tasks – from the initial idea to reliable series production.

Services at a glance:

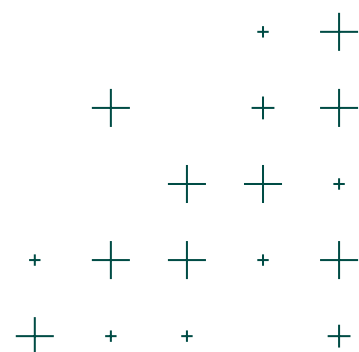
- Expert seam design consulting
- Detailed feasibility studies
- Test welding on prototype samples and pre-production parts
- Derivation of optimal process parameters
- Support with validation processes (e. g., medical technology)
- Leak tests (negative pressure, positive pressure, functional tests)
- Burst pressure tests for mechanical strength assessment
- Thermographic analyses of heat input
- Tensile tests for strength assessment
- Microtome cuts for detailed seam structure analysis

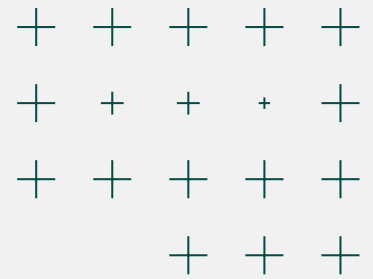
Structured, secure, efficient

A clearly structured process ac-
companies you from the initial idea to
reliable series production.

A | Step by step

We support you efficiently, trans-
parently, and reliably.





Your path to the ideal ultrasonic solution



1 | Project planning

We support you right from the early stages of product development and ensure that components and processes are optimally coordinated. Alternatively, we develop the ideal welding process for your existing component design.



2 | Application engineering

Expertise meets innovation. With a modern technical center, precise testing procedures, and decades of expertise in ultrasound, we can realistically simulate your application and develop robust, tried-and-tested solutions.



3 | Machine concept

You will receive a customized machine concept including:

- a well-founded feasibility study
- a complete 3D model of your system

This gives you maximum transparency – even before the project starts.



4 | Project execution

Following the principle of “one face to the customer,” a dedicated project team will accompany you from initial contact to final acceptance.



5 | Commissioning

We train your team directly on your machine – in a practical, understandable way that is perfectly tailored to your processes.



6 | After Sales service

Whether remote support, on-site service, or emergency response: we minimize downtime and ensure maximum availability of your system.



Three model variants for all work processes

Whether series production or flexible individual applications – the right model variant for every production requirement.

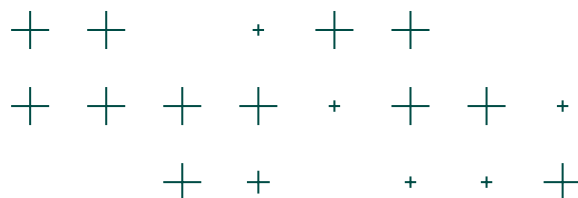
Whether inline module, column, or tabletop machines – with our model variants, you can implement any production process efficiently and precisely.

The **inline module** is ideal for highly automated production environments. Thanks to its very compact welding unit, it can be integrated in a space-saving manner and quickly aligned using a universal mounting plate. It allows flexible positioning of the process control system and the networking of several systems, and is particularly suitable for high quantities with low variant diversity.

The **column machine** impresses with its easy integration into automated production lines and its stable construction. A universal mounting base plate ensures quick alignment, while the welding process is controlled automatically. Here, too, flexible installation of the control system and the comprehensive networking of several machines is possible – ideal for near-series applications with constant processes.

The **table top machine** offers maximum flexibility in stand-alone operation. The welding process is operated manually via 2-hand operation. Tool-free quick-change systems for oscillating structures and workpiece holders enable ergonomic working and short change-over times, especially for frequently changing applications and a high number of variants.

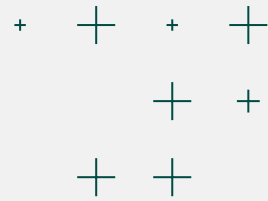
A | Three variants, one system
Our machine concepts cover the entire spectrum.



+	+	+	+	+
+	+		+	+
+	+	+	+	+
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+		+	+	+
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	Inline module ①	Column machine ②	Table top machine ③
Integration into automated environments	particularly easy integration	easy integration	mainly stand-alone
Required space / footprint	very compact welding unit	compact	compact, free-standing unit
Alignment / installation	universal mounting plate for quick alignment	universal mounting base for precise alignment	manual alignment, flexible positioning
Type of process control	flexibly mountable control unit with operating display	flexibly mountable control unit with operating display	manual operation, two-hand control
Welding process	automated in line	automatic control	manual triggering
Tool / component change	–	–	Tool-free quick change
Recommended for	High quantities, low variety	High quantities, constant applications	high variety, frequent changes
Typical area of application	fully automated production lines	semi-automated systems	flexible production stations / pilot production



MS sonxTOP OPUS



The **MS sonxTOP OPUS** offers the ideal entry into high-precision, servoelectric ultrasonic welding.

Variants	table top machine
Drive	100 % servo electric drive concept
Power ranges	<ul style="list-style-type: none"> • 20 kHz / 30 kHz: 50 – 3,000 N • 35 kHz: 50 – 1,000 N
Working stroke	<ul style="list-style-type: none"> • 20 kHz / 30 kHz: 410 mm • 35 kHz: 300 mm
Feed speed	max. 240 mm/s
Generator power	<ul style="list-style-type: none"> • 35 kHz: 1,000 W • 30 kHz: 2,000 W • 20 kHz: 2,500 W
Display	15,6" touchscreen
Part memories	recipe management for up to 30 welding recipes
Control	shutdown option 1: time, energy, distance absolute, distance relative
Interfaces	USB 2.0, Ethernet
Profiling	1 level + 1 holding force (force, speed)
Inputs and outputs	none
Software (Basic features)	IMPORT / EXPORT Manager (USB), FTP Connect, LOGICAL Assistant, SCREENSHOT, SEQUENCE



MS sonxTOP NEXUS

The **MS sonxTOP NEXUS** combines proven MS quality with expanded performance reserves and intelligent process control.

Variants	inline module, column machine, table top machine	
Drive	100 % servo electric drive concept	
Power ranges	<ul style="list-style-type: none"> • 20 kHz / 30 kHz: 50 – 3,000 N • 35 kHz: 50 – 1,000 N 	
Working stroke	column machine/table top machine: <ul style="list-style-type: none"> • 20 kHz / 30 kHz: 410 mm • 35 kHz: 300 mm 	inline module: <ul style="list-style-type: none"> • 20 kHz / 30 kHz / 35 kHz: 190 mm
Feed speed	max. 240 mm/s	
Generator power	<ul style="list-style-type: none"> • 35 kHz: 1,000 W • 30 kHz: 2,000 W • 20 kHz: 2,500 W • 20 kHz: 4,000 W (<i>optionally possible</i>) 	
Display	15,6" touchscreen, 18,5" touchscreen (<i>optionally possible</i>)	
Part memories	recipe management for up to 100 welding recipes	
Control	shutdown option 2: time, energy, distance absolute, distance relative, power absolute	
Interfaces	USB 2.0, Ethernet	
Profiling	3 levels + 1 holding force (force, speed, amplitude)	
Inputs and outputs	12 inputs and outputs	
Software (Basic features)	IMPORT / EXPORT Manager (USB), FTP Connect, LOGICAL Assistant, SCREENSHOT, SEQUENCE, DATABASE I/O	

MS sonxTOP FUSION



The **MS sonxTOP FUSION** is the ideal solution for complex applications that require maximum precision and particularly dynamic welding processes.

Variants	inline module, column machine, table top machine	
Drive	100 % servo electric drive concept	
Power ranges	<ul style="list-style-type: none"> • 20 kHz / 30 kHz: 10 – 3,000 N • 35 kHz: 10 – 1,000 N 	
Working stroke	column machine/table top machine: <ul style="list-style-type: none"> • 20 kHz / 30 kHz: 410 mm • 35 kHz: 300 mm 	inline module: <ul style="list-style-type: none"> • 20 kHz / 30 kHz / 35 kHz: 190 mm
Feed speed	max. 240 mm/s	
Generator power	<ul style="list-style-type: none"> • 35 kHz: 1,000 W • 30 kHz: 2,000 W • 20 kHz: 4,000 W • 20 kHz: 6,000 W (<i>optionally possible</i>) 	
Display	15,6" touchscreen, 18,5" touchscreen (<i>optionally possible</i>)	
Part memories	recipe management for up to 300 welding recipes	
Control	shutdown option 2: time, energy, distance absolute, distance relative, power absolute	
Interfaces	USB 2.0, Ethernet	
Profiling	5 levels + 2 hold force (force, speed, amplitude)	
Inputs and outputs	12 inputs and outputs	
Software (Basic features)	IMPORT / EXPORT Manager (USB), FTP Connect, LOGICAL Assistant, SCREENSHOT, SEQUENCE, DATABASE I/O, NETWORK	



MS sonxTOP GENESIS

The **MS sonxTOP GENESIS** is at the top of the series. It combines maximum performance, intelligent processes, and comprehensive connectivity.

Variants	inline module, column machine, table top machine	
Drive	100 % servo electric drive concept	
Power ranges	<ul style="list-style-type: none"> • 20 kHz / 30 kHz: 10 – 3,000 N • 35 kHz: 10 – 1,000 N 	
Working stroke	column machine/table top machine: <ul style="list-style-type: none"> • 20 kHz / 30 kHz: 410 mm • 35 kHz: 300 mm 	inline module: <ul style="list-style-type: none"> • 20 kHz / 30 kHz / 35 kHz: 190 mm
Feed speed	max. 240 mm/s	
Generator power	<ul style="list-style-type: none"> • 35 kHz: 1,000 W • 30 kHz: 2,000 W • 20 kHz: 6,000 W 	
Display	18,5" touchscreen	
Part memories	recipe management for up to 1,000 welding recipes	
Control	shutdown option 3: time, energy, absolute distance, relative distance, absolute power, force, external shutdown, combination of shutdown options	
Interfaces	USB 2.0, Ethernet	
Profiling	10 levels + 2 hold force (force, speed, amplitude)	
Inputs and outputs	30 inputs and outputs	
Software (Basic features)	IMPORT / EXPORT Manager (USB), FTP Connect, LOGICAL Assistant, SCREENSHOT, SEQUENCE, DATABASE I/O, PDF Storage, TENSILE (table top machine), CHART Advanced, USER Admin (USB), TOOL PROTECT Energy, GRADIENT, USER Upgrade, NETWORK, INPUT / OUTPUT Package (30 I/O), WELD SETUP Extended	

Maximum process intelligence

With the software options of MS sonxTOP, you can specifically expand the functionality of your system.

A | Intuitive and smart
Quick to set up, secure to use,
transparent to monitor.

1 | MS sonxWARE GATEWAY

MS sonxWARE GATEWAY connects MS sonxTOP with external systems such as ERP control systems. Common bus systems such as Profinet, Profibus, EtherCAT, and EtherNet/IP are supported.

2 | MS sonxWARE REMOTE

MS sonxWARE REMOTE enables a secure, end-to-end encrypted connection between MS sonxTOP and the manufacturer. This means that fast support is available at any time in the event of malfunctions or maintenance.

3 | MS sonxWARE OPC UA

MS sonxWARE OPC UA enables secure, reliable data transfer between MS sonxTOP and ERP/MES systems without additional hardware. It enables data exchange from the sensor to the cloud level (OT/IT) and is a key element for Industry 4.0.

4 | MS sonxWARE USER Admin (USB)

The MS sonxWARE USER Admin (USB) software allows users to automatically log in to a machine using a USB stick. This makes it easy to conveniently manage users with different access rights simply by using a USB stick.

5 | MS sonxWARE TOOL PROTECT Energy

MS sonxWARE TOOL PROTECT Energy automatically monitors the power consumption and frequency of the sonotrode/vibrating structure at user defined intervals in order to identify any potential damage to the sonotrode in advance.

6 | MS sonxWARE CHART Advanced

The software package graphically visualizes selected welding process parameters. Up to 7 parameters are displayed in the large chart display and 3 parameters in the small chart display.

In addition, other specialized software options are available that provide additional functions and enhancements tailored to specific applications.



	+	+		+	+	+
			+	+	+	+
+	+	+	+	+		+
				+	+	+

MS sonxWARE software options at a glance

	MS sonxTOP OPUS	MS sonxTOP NEXUS	MS sonxTOP FUSION	MS sonxTOP GENESIS
NETWORK	○	○	●	●
PDF Storage	○	○	●	●
CHART Advanced	-	○	○	●
USER Admin (USB)	-	○	○	●
TOOL PROTECT Energy	-	○	○	●
GRADIENT	-	-	○	●
USER Upgrade	-	-	○	●
TRACE Basic	-	○	○	○
TRACE Advanced	-	-	○	○
JOB CONTROL	-	-	○	○
OPC UA Server	-	-	○	○
INPUT / OUTPUT Package (30 I/O)	-	-	○	●
WELD SETUP Extended	-	○	○	●
REMOTE	○	○	○	○
SONOCOOL	-	○	○	○
RFID	-	○	○	○
SCAN	-	○	○	○
USER Batch Reader	-	○	○	○
GATEWAY	-	○	○	○
ENERGY Manager	-	○	○	○
AIR Manager	-	○	○	○

- Not available ○ Optional ● Basic features

Note: Certain software options also require hardware additions.

HARDWARE ADDITIONS

1



2



3



5



4

+ + + + +

+ + + + +

+ + + + +

+ + + + +

Get more out of your MS sonxTOP

With perfectly matched add-on components, you can expand the performance of your series machine specifically for your application.

1 | Ergonomic work table

The surface is available in wood, aluminum, and custom designs.

2 | Sound-insulating cabinet

The sound-insulating cabinet offers maximum sound insulation, safety, and ergonomics. Among other features, it includes a lift door with a safety contact strip.

3 | Polycarbonate housing

The robust polycarbonate cabin provides reliable protection during welding, offers optimal visibility, and ensures a clean, ergonomic working environment thanks to integrated safety technology. The cabin is equipped with a powerful ventilation system that removes welding fumes and ensures a healthy working environment.

4 | Fully automatic foil cycling device

Available in various sizes, the foil cycling device for the MS sonxTOP ultrasonic series machines ensures fully automated feeding of the protective film.

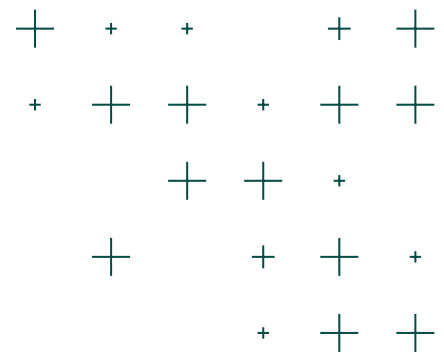
5 | Quick-change function

The quick and easy, tool-free replacement of the stack reduces downtime.

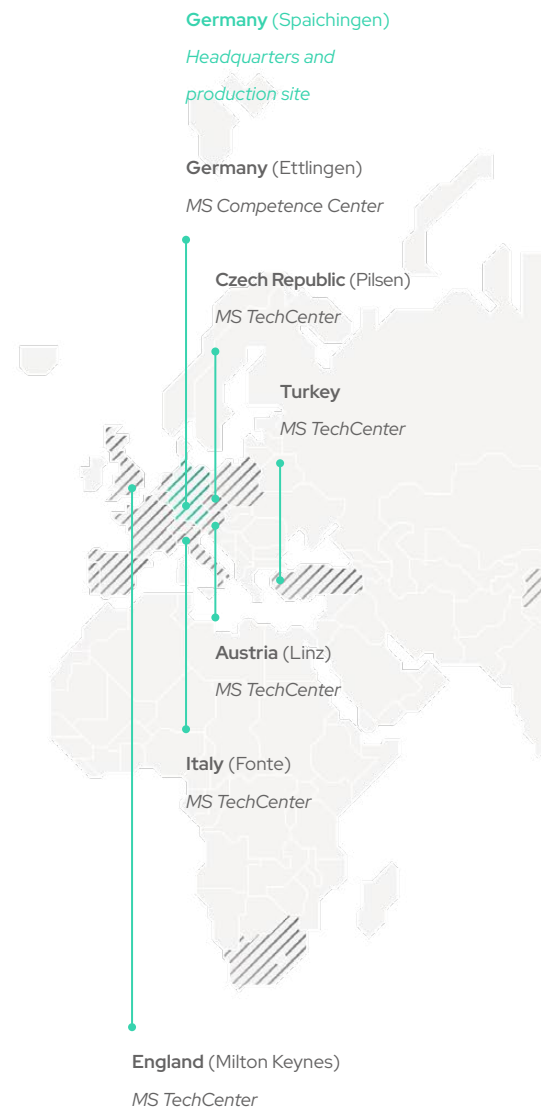
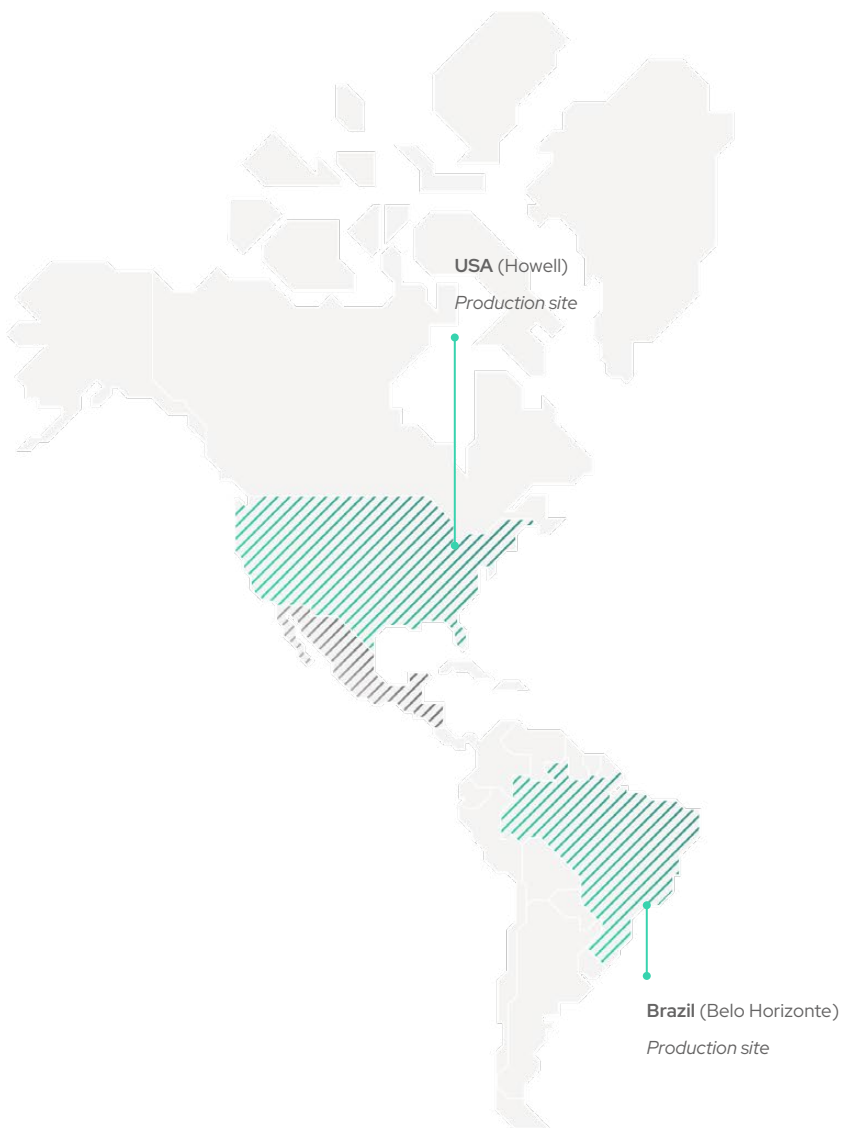
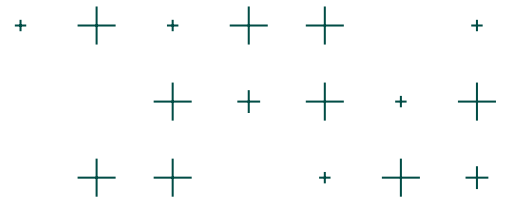
6 | More options

In addition to the main technical modules, numerous additional options are available. These include sonotrode cooling, work and signal lights, light curtains, hand scanners, sensor modules, and camera systems.

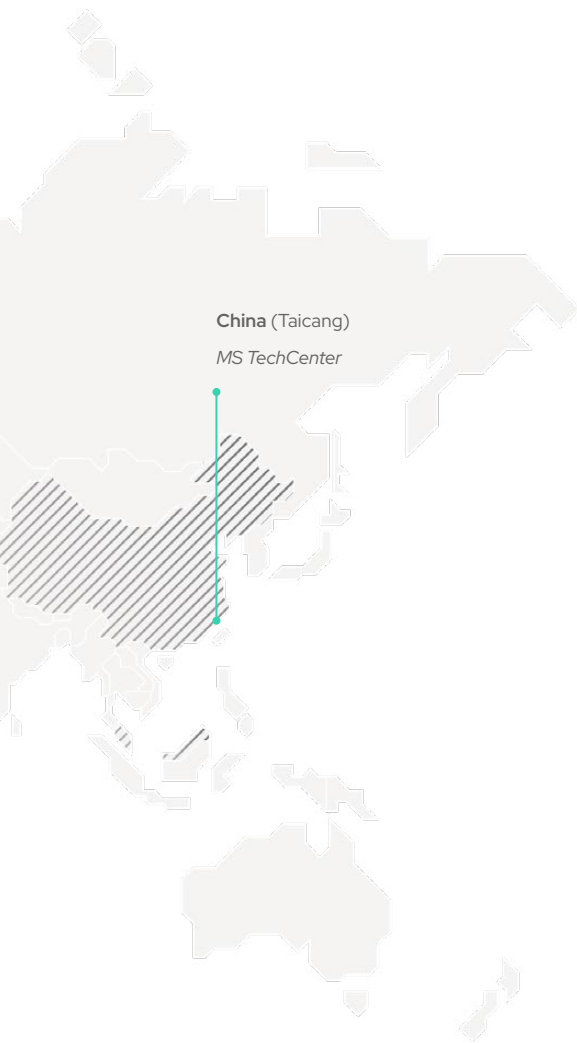
These enhancements increase ease of use, process monitoring, and safety – for a perfectly coordinated production process.



AFTER SALES SERVICE



Efficient and always within reach



Reliable service, fast assistance, and global support ensure maximum productivity

Whether spare parts, maintenance, service calls, or repairs: our service ensures that your production continues to run safely, stably, and efficiently.

Our original spare parts undergo strict quality checks, ensuring the optimal function, reliability, and service life of your machines. At the same time, our qualified service technicians offer rapid support – from online diagnostics to worldwide on-site service. This allows us to minimize downtime and maximize the availability of your systems. For us, professional service is the basis for a long-term and successful partnership.

Service and maintenance

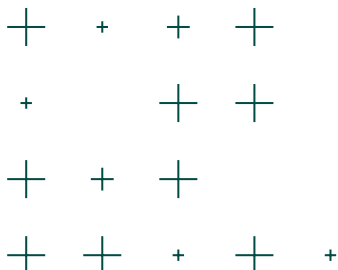
- Worldwide service calls and fast response times
- Personal, individual support
- Online fault diagnosis and remote support
- Practical training for your employees
- Hotline for immediate assistance

Spare parts procurement

- Fast, reliable delivery through optimized warehousing
- Machine modifications and technical enhancements
- Original spare parts in tested manufacturer quality

Repair

- Rental and loan equipment to bridge repair times



#TEAMSONO



Combined expertise in the field of ultrasonic welding of metals and plastics.

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