Industrial ultrasonic solutions

Expertise and partnership
TELSONIC is one of the leading industrial ultrasonics technology suppliers worldwide.

Alongside TELSONIC-specific technologies in the fields of plastic and metal welding, as well as cleaning and screening, in-depth know-how represents one of our greatest assets.

Our employees continually develop our products and services further and, in doing so, set new standards in ultrasonics technology.

For our customers this means quality and innovation alongside the highest productivity.

Dr. Axel Vietze
CEO and Chairman of the TELSONIC Group
Short profile
The TELSONIC Group – successful worldwide

1966 I Foundation of TELSONIC AG in Bronschhofen, Switzerland
1977 I Founding of TELSONIC UK Ltd. in Poole, England
1989 I Founding of TELSONIC GmbH in Erlangen, Germany
2004 I Founding of TELSONIC d.o.o. in Kac, Serbia
2005 I Founding of TELSONIC Ultrasonic Inc. in Michigan, USA
2007 I Founding of TELSONIC Ultrasonic Equipment Co. Ltd. in Shanghai, China
2010 I Acquisition of Sonic Solution Systems USA in Boston, USA
2013 I Strategic cooperation with the Schleuniger Group, Switzerland

1966 I CLEANING
1970 I PLASTIC WELDING
1978 I METAL WELDING
1984 I CUTTING, CUTTING AND SEALING
1989 I FOOD-CUTTING
1992 I PACKAGING
1993 I SCREENING

TELSONIC AG
Head Office of the group
Bronschofen
Switzerland

TELSONIC UK Ltd.
Poole Dorset
Great Britain

TELSONIC GmbH
Erlangen
Germany

TELSONIC d.o.o.
Kac
Serbia

TELSONIC Ultrasonic Equipment Co. Ltd.
Shanghai/Shenzhen
China

TELSONIC Ultrasonic Inc.
Shelby Township, MI
USA

TELSONIC Solutions Inc.
Newton Upper Falls, MA
USA

The registered office of the TELSONIC Group is in Bronschhofen, Switzerland.
More than 200 highly-qualified employees, individual affiliates in Germany, England, America, Serbia, China and specialized distributors support our customers in developing and implementing ultrasonic-controlled applications and processes.

TELSONIC works closely with institutions of higher learning in Switzerland and Germany and promotes research and basic teaching on the use of ultrasonic technology. Quality and progress are our motivation.

Ultrasonic technology can no longer be ignored in the production of plastic and metal goods or their final assembly – nor can TELSONIC as an ultrasonics specialist.

We are certified in accordance with ISO and ATEX and apply Lean Production principles. The technical documentation of our products corresponds to the DIN-EN-15038 standard. Countless patents in the field of industrial ultrasonic applications prove our innovative power.
**TELSONIC values**

“We have common corporate values”

Although TELSONIC employees service different regions, their work is based on the same core values worldwide:

- Appreciation, trust and efficient performance.

We stand for quality, progress and the highest benefit to our customers.

**Our employees**

“I am pleased to work at TELSONIC. The company’s culture won me over and I am treated as an individual”

*Ralf Müller, Team Leader Application Engineering – TELSONIC AG*

Our employees are our investment in our future. TELSONIC’s corporate culture places great value on performance and responsibility.

We are committed to employing young people and investing in their training and developing their skills for the future.

We value employee satisfaction, open communication, honest dealing, respectful interaction and leadership through example.
Innovations
“We live progress”

The industrial use of ultrasonics is continually opening interesting new application possibilities and today they are found everywhere in modern production processes. We have the highest competence in acoustics through the FEM calculation of oscillation systems. When conventional methods are not suited to a particular application, our additional torsional welding processes offer greater potential. This guarantees the best possible quality for our customers. Icon-based UI design and machine control with OPC-UA interface to complement our expertise.

Innovative peak performance

- SONIQTWIST®: Torsional welding of metal and plastic
- PowerWheel*: Torsional welding with optimised force transmission
- Digital ultrasonic generators with the most modern bus systems
- Ultrasonic systems with the highest performance
Production
“Efficient manufacturing processes guarantee competitive solutions”

Our automated production organisation follows the lean manufacturing philosophy. This focuses on the needs of our customers. This especially concerns the requirements for short delivery times and fault-free products. We are certified in accordance with ISO 9001 (SQS).

Markets
“Our customers have faith in reliable TELSONIC systems”

Thanks to many years of experience and constant technological improvement, TELSONIC offers advanced ultrasonic generators, oscillation systems and system solutions. The fields of application are found in practically all areas of industry and we are in syncronicity with the ideas and demands of our globally active customers and working partners.

Our experienced sales engineers and application specialists develop optimised system concepts for the individual applications according to precisely defined requirements. The technical possibilities of our laboratories are key in this and in the process our customers receive information that is valuable in the design of their components and products.

Our fully trained and experienced service team offer support in the long-term operation of ultrasonic systems and are available to offer advice and assistance.

Example applications of industrial ultrasonics
Our technical fields

Plastic welding
Ultrasonic plastic welding is suitable for virtually all thermoplastics. When planning welds between semi-crystalline plastic workpieces, it is important to remember that the weld behaviour of these plastics differs considerably from that of amorphous plastics. Alongside the proven longitudinal welding process we exclusively offer the torsional ultrasonic welding SONIQTWIST®, which is characterised by minimal effect on components.

Metal welding
TELSONIC takes an innovative path to new solutions in ultrasonic metal welding. Our high-performance systems and the unique torsional technologies PowerWheel® and SONIQTWIST® extend the performance spectrum in metal welding and enable the welding of a variety of materials, shapes and dimensions that previously were not possible to weld with ultrasonics.

Cutting/Cut’n’seal
An ultrasonically vibrating knife blade penetrates the product to be cut with minimal resistance and separates it precisely. Nonwovens and wovens, particularly for filters, must today be manufactured in an economical and process-safe way. With our ultrasonic technology we cut cleanly and quickly with aesthetically sealed edges. Sonotrodes and anvils designed especially for the application enable the manufacture of almost every type of shape, something our customers in the medical technology, cosmetics, packaging and mechanical engineering fields find of great advantage.

Screening
The requirements in the industrial screening process have become more complex, the powders finer, the throughput times shorter and the selectivity narrower. Our ultrasonic methods offer efficient solutions, with systems resonating the finest screen fabric, increasing throughput rates due to the permanent cleaning of the screen and the degree of selectivity of the screened product.

Cleaning
Ultrasonic cleaning has become an integral part of industrial production processes. The elimination of contamination is important for process reliability, prepares further process steps and is suitable for the final cleaning of products. The versatile ultrasonic components from TELSONIC fulfill the requirements of our customers’ increasingly complex applications. They can be flexibly integrated into automated cleaning installations, even in the toughest production requirements.
Plastic welding

Reliable joining technology with ultrasonics

More than 40 years’ experience in a wide range of application areas
Versatile applications in thermoplastics
Longitudinal ultrasonic welding and the patented torsional welding process SONIQTWIST®
Advanced generator technology, developed in Switzerland

Sensor in plastic housing
Sensor support
Metal welding

Many years of in-depth application experience in the automotive and electronics industry
- Strand welds of up to 160 mm² copper and 200 mm² aluminium
- Higher welding power up to 10 kW
- Linear welding and internally developed, patented torsional welding SONIQTWIST® and PowerWheel®

Highest process control with ultrasonics
Cutting, Cut’n’seal

Simultaneous cutting and welding with ultrasonics

Expertise through multi-faceted industrial application experience
Simultaneous micro-fine welding and cutting of textiles
Cutting of food precisely without crushing, crumbling and minimal residue
Screening

Efficient screening with ultrasonics

- Ultrasonics guarantee high throughput quantities
- Customer-specific construction of screening frames
- Products available in ATEX variants

Carbon powder

Powder coating
Cleaning

Perfect cleaning with ultrasonics

Many years of application experience
High performance tube resonator systems
Highly reliable process

Cleaning process showing cavitation
Cylinder head cleaning
Wide range of application areas for ultrasonics

Automotive industry
In the automotive industry, ultrasonic is particularly used for the welding of plastics and wires on cable looms, cleaning parts in the production process and for the screening of powder coatings.

Medical industry
The high quality requirements in the medical industry are fulfilled perfectly through cut’n’seal, cleaning and screening with ultrasonic.

Textiles industry
Cut’n’seal and separating with ultrasonic are particularly used when handling textiles, foams and faux leather. Clean and soft cut edges are created.

Food industry
The food industry is distinguished through applications like cutting and packaging with the use of ultrasonics. Applications of this type are particularly good, because the strict hygiene requirements are complied with.

Plastics industry
Everywhere where plastics are processed you will find ultrasonic applications, which are used for the combining of two components, the burr-free cavity punching and the sealing of packages.

Packaging industry
In packaging, ultrasonic is used in order to weld spouts from containers in a seal-tight manner. Endless packages, like tubular bags, can also be sealed air-tight.

Battery industry
During battery production, ultrasonic welding procedures are widely distributed in order to reach a reliable connection of the basic components including terminals and foils etc.
Plant installation
“TELSONIC components for plant and machine automation”

Generators
Digital ultrasonic generator MAG
Compact dimensions for integration into electrical cabinets

Actuators
Ultrasonic actuator systems for flexible use in machine construction

Controller
TCSS for generators

Sonotrodes
Ultrasonic welding tools made from steel, titanium or aluminium, depending on application requirements

Ultrasonic components for plant automation or integration
Design and production of ultrasonic tooling
BUS modules for EtherNet/IP, Profinet, Profibus