

Company portrait



Development, production and sales of ultrasonic devices for applications in laboratories, industries, medical, pharmaceutical and dental fields

Dear business partners and friends,

Welcome to Berlin! Our capital city is inspired by a unique history, a steady change and a lively atmosphere. At this particular location, our family business has been present since the company's establishment in 1946.

With this brochure we would like to invite you through the different departments and to a time travel. The high quality requirements for our products are always the essential principles guiding our actions.

We are looking forward to welcome you to a personal excursion through our company.

Best Regards



Stefan Bandelin
Managing Director



Jutta Gehrke
Managing Director

BANDELIN electronic GmbH & Co. KG

Our high-qualified production procedure



BANDELIN Ultrasound since 1955

– The Company profil

BANDELIN electronic, a family-owned mid-sized company, is located in the capital of Germany – Berlin. Development and manufacture of ultrasonic devices and disinfection and cleaning agents are carried out in Berlin. A wide vertical range of manufacture, modern production lines and a motivated staff guarantee a high quality of the products. The customers can buy everything from one-hand. Ultrasonic devices are in use in nearly all branches like industry, maintenance, service, medical, pharmaceutical, dental and laboratory.

Development and manufacture of high-power ultrasonic devices began already in 1955. The product range was enlarged in the middle of the eighties caused by increased sales. Adjustable and power-constant HF-generators were launched in 1992.

The brand names SONOREX, SONOMIC, TRISON and SONOPULS are equated with ultrasound from experts.

The most important product groups are:

- SONOREX – Ultrasonic baths and reactors
- SONOMIC – Ultrasonic bath for rinsable keyhole surgery instruments and standard instruments
- TRISON – Ultrasonic bath for robotic instruments, rinsable keyhole surgery instruments and standard instruments
- TICKOPUR – Cleaning agents
- STAMMOPUR – Disinfection and cleaning agents
- SONOPULS – Ultrasonic homogenisers

BANDELIN electronic is the leader in development of new ultrasonic devices and opening up new application areas. In the past about 46 patterns / utility patents and 66 brand names were applied for. The company supports several committees in compiling of norms and guidelines. All products are CE marked. By today more than one million devices are delivered.

Made in Germany

Tell us your requirements –
We will pleased to advice you at no obligation.

Feel free to consult our experts:

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www.bandelin.com

www.facebook.com/bandelin.electronic



LABORATORY

For laboratory and pilot plant use, we produce ultra-sound homogenisers with application-oriented accessories for routine operation as well as for use in research. The ultrasonic homogenisers have been successfully implemented for over 25 years, for sample preparation in sewage and soil analysis, cell disruption, emulsification, reaction acceleration or for the production of very fine emulsions. In the laboratory, high-performance ultrasonic baths are used not only for the thorough cleaning of laboratory glass but also for the effective homogenisation of samples.

For any further information visit www.bandelin.com or check our **laboratory catalogue**.



PROCESS ENGINEERING

The BANDELIN tube reactors enable the continuous sonication of high volume flows in process technology.

With this technology, the processes known from the laboratory can also be implemented in large-scale plants.

This especially affects the support of industrial and biotechnological processes during cleaning, disintegration, demulsification, degassing and deagglomeration.

For any further information visit www.bandelin.com or check our **process engineering catalogue**.





INDUSTRY AND SERVICE

Our professional ultrasonic cleaners of the SONOREX TECHNIK program are used in industry and in service for effective parts cleaning. The widespread applications include the cleaning of filters, valves, injection nozzles, carburetors, rotating parts, tools, spark plugs and many more. For an optimal cleaning result, we offer a wide range of suitable cleaning products which are adapted to the type of soiling and the basic material to be cleaned.

For any further information visit www.bandelin.com or check our **industrial catalogue**.

Cleaning examples



SONOREX TECHNIK



RESPIRATORS

Respiratory protection devices are contaminated after each use and can be contaminated with pathogens or hazardous substances. In order to restore the readiness for use and to avoid health risks, respiratory protective devices must be cleaned and disinfected according to applicable regulations.

In the ultrasonic bath, the cleaning is done quickly and thoroughly, so that the respiratory masks are ready for use again with little effort.

For more information, please visit www.bandelin.com.





MEDICINE

With our ultrasonic cleaners and the appropriate disinfecting preparation, simultaneous cleaning and disinfection of medical instruments is made possible.

Our product range varies from compact ultrasonic baths for dental practice to automated suction rinsing devices for the reprocessing of MIS and robotics instruments in the hospital sterilisation of hospitals.

For any further information visit www.bandelin.com or check our **medicine catalogue**.

SONOMIC



TRISON



STAMMOPUR



TICKOMED

DENTAL

The BANDELIN ultrasonic baths are used in the dental field, in particular for instrument preparation and impression mold cleaning. Ultrasonic cleaning allows thorough and reliable cleaning and disinfection for a fast instrument recirculation.

Due to the specially developed attachment beakers, impression mold cleaning and instrument disinfection, with different cleaning preparations, can be carried out simultaneously in one device.

For any further information visit www.bandelin.com or check our **dental catalogue**.



Knowledge of ultrasound

Which ultrasonic bath should I select?

The size of the cleaning object will determine the size of the bath and thus the device type. Basket dimensions must be taken into account when selecting a device. To prevent device overload, it is always better to choose a somewhat larger device. This also results in additional space for other uses.

Further important criteria for the decision are the operating controls and the desired design. For rinsable MIS instruments and complex robotic instruments, ultrasonic baths with additional functions such as rinsing and instrument motion are available, in order to meet the higher cleaning requirements.

Does an ultrasonic bath need a heating?

Devices without heating are preferred for disinfection and cleaning after dry deposits, as at temperatures above 40 °C there is a risk of protein coagulation, which will hamper cleaning and disinfection. Devices with a heating are used for basic cleaning of instruments, as in such cases, heating of the bath fluid shortens the cleaning time and removes soiling more quickly.

What accessories are necessary?

Cleaning objects must not lie on the bottom of the bath. Baskets and other inset beakers prevent scratching both to the cleaning objects and the bottom of the bath floor. When cleaning very small or sensitive parts, further accessories may be advisable to facilitate careful placement. For safety reasons, it is recommended that ultrasonic baths be kept covered (see TRBA 250).

What fluids should be used?

STAMMOPUR preparations have been specially developed for use in ultrasonic baths. Water without a detergent will not have a cleaning effect. Do not use household detergents or pure DI water. For work with acids, a plastic insert tub must be used. Never use inflammable or explosive fluids directly in the oscillating tank!

How can ultrasonic baths be tested?

The effectiveness of ultrasonic baths depends on the intensity and distribution of the process-typical cavitation in the oscillating tank. The foil test (according to

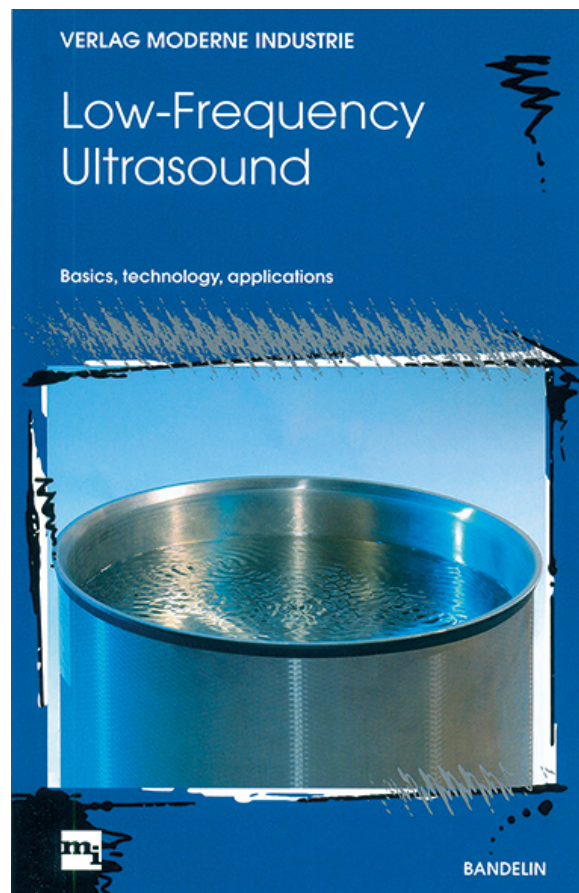
IEC/TR 60886: 1987) is a simple procedure for demonstrating the intensity and distribution of cavitation in an ultrasonic bath. In this test, an aluminium foil placed in the tank is perforated / destroyed to a certain degree by cavitation, depending on the duration of sonication. To achieve reproducible foil test results, it is important to provide similar testing conditions in each case. Suitable setups for performing foil tests are available as accessories for the ultrasonic baths.

If you want to know more ...

... visit our website with its own YouTube channel and many helpful instruction videos!

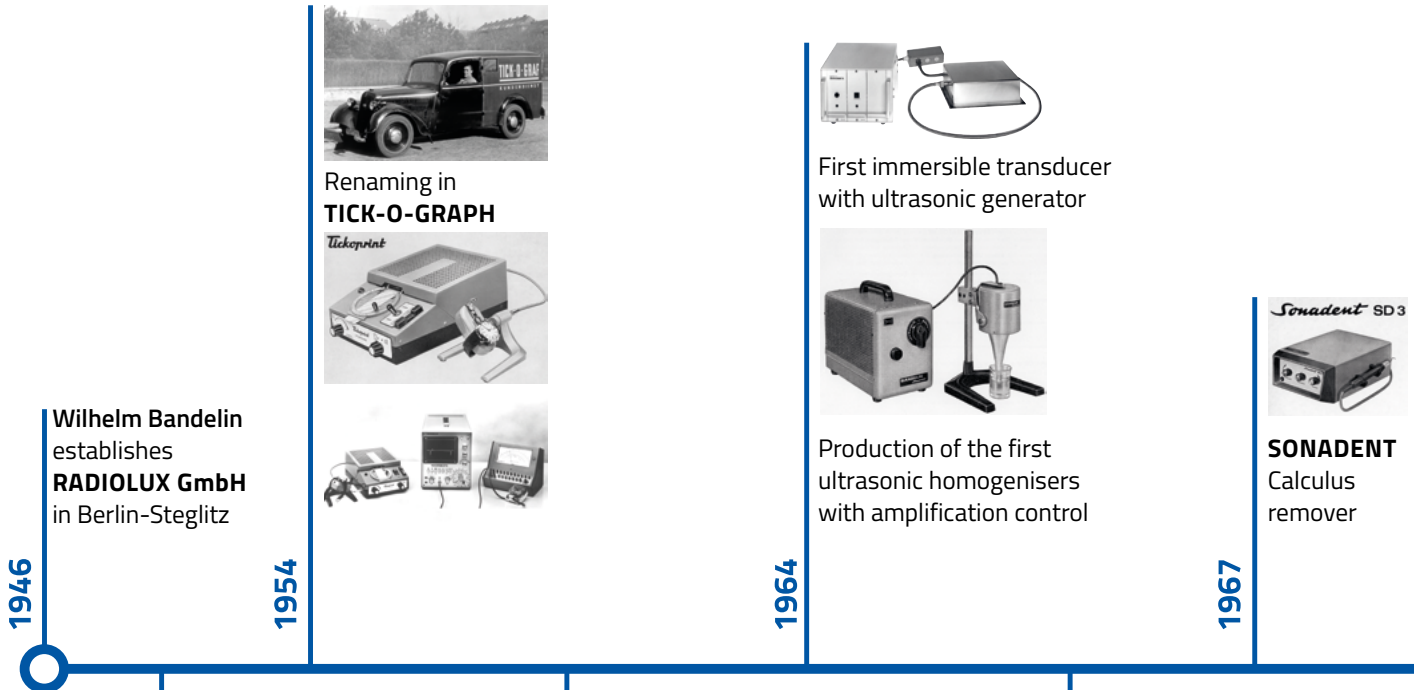
Or contact us directly... we are always pleased to provide advice, so call us at +49 30 76880-0.

Further information about ultrasound ...



... can be found in the book "Low-Frequency Ultrasound", available from your bookseller.

Company history



1949



Start of development and production of ultrasonic cleaning devices with amplification control

1955



Production of high-power ultrasonic cleaning devices

1965



The new building Heinrichstraße 3-4 in Berlin-Lichterfelde

Inspired by a new technology and equipped with a distinctive business sense, Mr. Wilhelm Bandelin establishes RADIOLUX GmbH producing afterglow colours in Berlin-Steglitz. In the following "German Economic Boom Years", he launches the serial production of measuring devices to test the rate accuracy of mechanical clockwork movements. The TICK-O-GRAF W. Bandelin K.G. company is incorporated. The technical progress encourages the manufacturing of powerful ultrasonic baths for the cleaning of jewellery and watches. Initially the production is carried out in two small company locations in Berlin-Steglitz. The increasing demand to reprocess medical instruments in ultrasonic baths exceeds all expectations. Therefore the BANDELIN company moves into a larger new building to Heinrichstraße in Berlin-Lichterfelde, today's location.

1971



Legal form changed to
**BANDELIN electronic GmbH
& Co. KG**



SONOREX TRANSISTOR RK
Ultrasonic baths
with transistor technology

1985



SONOREX TECHNIK
High-power
ultrasonic generator
with thyristor technology

1988



Appointment of
Dipl.-Ing. Stefan Bandelin
as Managing Director



Enlargement of production area

1991

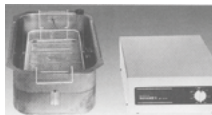


SONOPULS HD
Ultrasonic
homogenisers



SONOREX Z B-E
Ultrasonic baths
for solvents use

1982



SONOREX Z
Two-part
ultrasonic built-in baths
for the medical field

1986



SONOREX PR
Ultrasonic
pipette cleaner

1990



SONOREX DIGITAL DK
Digital ultrasonic baths



SONOREX T and GT
Laboratory transducers
with ultrasonic generators

The BANDELIN ultrasonic technology is used in more and more application fields, not only for ultrasonic cleaning but also for ultrasonic process technology, e. g. for homogenising, dispersing, cell disruption or sample preparation. Due to the significantly increased sales figures, the production space at the site is doubled by an expansion building. More than 100 employees are working for R & D, manufacturing and sales.

Mr. Stefan Bandelin graduates as an electrical engineer at the Technical University of Berlin and joins the BANDELIN company.

1992



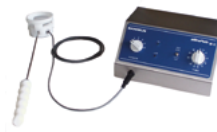
SONOREX LG
Launch of variable and power constant ultrasonic generators

1997



SONOREX TECHNIK RT
First sonoreactors for flow-through sonication process

1999



ULTRAPULS
Therapy devices

2002



SONOREX TECHNIK ZM
Two-part cleaning devices for use in the industry



SONOREX TECHNIK RB
SONOBLOC Tube reactor



SONOREX TECHNIK CONCAVON
and **CONVEXON**

1996



First certification in accordance with
ISO 9001 / ISO 46001



SONOREX TECHNIK RM
Modular ultrasonic baths

1998



SONOREX TECHNIK
Immersible transducers, flat transducers and compound plates

2001



SONOREX TECHNIK W
Ultrasonic baths with high-board for use on a vessel

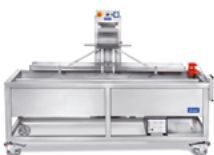
BANDELIN introduces controllable and high-performance ultrasound generators. The generator technology is continually developed in the following years. Numerous BANDELIN innovations maintain the market leadership.

The new ultrasonic tube reactors enable an efficient use in process technology. These reactors are not only used for homogenising, emulsifying or germ elimination in fish farming but also for mechanical disruption to improve the bio-degradability of biogas substrates.

2003



Appointment of
Jutta Gehrke,
maiden name **Bandelin**,
as Managing Director



SONOREX TECHNIK L
Ultrasonic baths for
cleaning of blinds

2005



SONOREX DIGITEC DT/.. RC
Digital ultrasonic cleaning baths with
Interface and software **WINSONIC®**

2008



SONOSHAKE
for sample preparation



SONOREX TECHNIK WR
Vortex reactors

2004



SONOREX TECHNIK ZM
Modular ultrasonic baths with ultrasound
from the bottom and from the side



SONOPULS serie 3000
Ultrasonic homogenisers

2006



SONOMIC MC ultrasonic bath
for MIS instruments



Book publishing
»Low-Frequency Ultrasound«

The appointment of Mrs. Jutta Gehrke as Managing Director optimizes further business processes within the company. The established ultrasonic technology is linked with automation and networking to guarantee a continuous state-of-the-art. A variety of interfaces open up new opportunities for control and documentation of the cleaning and laboratory processes.

2010



BactoSonic BS
Special bath for the biofilm
removal of biofilms on joints



SONOCOOL
Ultrasonic bath with cooling

2014



Jochen Bandelin
joins the company



SONOPULS serie 4000
Ultrasonic homogenisers

2016

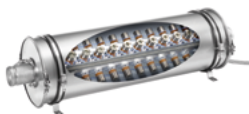


TRISON 4000
Ultrasonic bath for cleaning
of robotic instruments

2013



SONOREX DIGIPLUS DL
Digital ultrasonic baths
with power control



SONOREX TECHNIK RB
Ultrasonic tube reactors
3 / 5 inches

2015



Ultrasonic system **US 1**
for revenue growths
of biogas plants

2017



SONOREX TECHNIK
IP67 Generator
The world's first
waterproof
ultrasonic generator

After graduating from process engineering studies, Mr. Jochen Bandelin joins the company.

The production's energy efficiency is significantly increased by optimizing the company's lighting system, generation of pneumatic air and the supply of process heat.

The newly mounted photovoltaic system stands for renewable energies and covers the increasing share of the company's electricity requirements. The system is installed on the BANDELIN company's building roof.

Large-scale ultrasound technology contributes to sustainable energy generation by recent research projects regarding the output increase of biogas and sewage treatment plants.