



**WEBER
ULTRASONICS**

**SONOPOWER 3S
GENERATOR SERIES**

**CLEAN
SINGLE FQ**
MADE IN GERMANY

**CLEAN
DUAL FQ**
MADE IN GERMANY

**CLEAN
MULTI FQ**
MADE IN GERMANY

SONOPOWER 3S GENERATION 4.0



STRONGER, SMARTER, CLEANER
UP TO 3000 WATTS
FROM 25 TO 132 KHZ



THE FUTURE OF ULTRASONIC CLEANING

**THE SONOPOWER 3S SERIES:
SINGLE-, DUAL- OR MULTIFREQUENCY**

AN INTELLIGENT POWERHOUSE

**THE BEST ULTRASONIC GENERATOR
OF ALL TIME**

The fourth generation of SonoPower digital generators are stronger and smarter than ever before. With up to 3000 watts they revolutionise your cleaning processes. Intelligent, patent-pending functions ensure unparalleled cleaning results, the greatest possible process reliability and the simplest handling. As such, the new SonoScan function determines the optimum cleaning frequency even faster and more precisely. Once connected to the mains and the transducer, the system is ready for use right away. Moreover, the generators of the SonoPower 3S series are self-configuring.

READY FOR INDUSTRY 4.0

Current trends such as electromobility, lightweight construction, additive manufacturing, connectivity and miniaturisation are presenting ever tougher challenges for cleaning processes. After all, the cleanliness of surfaces and components is a key quality factor in manufacturing processes and for product quality.

Furthermore, fully automatic production facilities require absolutely reliable systems that constantly deliver cleaning results of impeccable quality. Finally, it must be possible to integrate ultrasonic generators seamlessly in the company's IT-based process control.

The SonoPower 3S series meets all requirements of process-optimised manufacturing methods: higher cleaning power, greater process reliability, consistently high quality and seamless integration thanks to PROFIBUS and PROFINET interfaces.

SONOPOWER 3S GENERATOR SERIES



THE PERFECT FIT FOR EVERY TASK

THE SOLUTION FOR THE MOST CHALLENGING SYSTEM CONCEPTS

Faster, better, more efficient – the challenges faced by plant manufacturers are becoming tougher from one day to the next. The pressure to deliver innovations is growing. More and more technologies must be mastered perfectly. Rationalisation and reduced complexity are therefore the order of the day in modern plant engineering. The SonoPower 3S series has been designed specifically with this in mind. It offers maximum flexibility as a device series that can be seamlessly integrated in all systems.

THE RIGHT GENERATOR – THE THREE MODELS:

- **SonoPower 3S Single**
An impressive 3000 W of power output for cleaning with one frequency
- **SonoPower 3S Dual**
with two frequencies for multi-level processes
- **SonoPower 3S Multi**
with three frequencies for full flexibility from coarse to superfine cleaning

SonoPower 3S generators can be used for all cleaning tasks. All relevant frequency and power output combinations are available for all relevant applications, from Single 25 kHz, through Dual 25/50 kHz, 40/80 kHz, all the way up to 40/80/132 kHz. A second transducer connection allows two-level cleaning units to be built with just one generator: a real economic advantage.

With the optional PROFIBUS or PROFINET interfaces, the generators of the 3S series can be integrated in a higher-level process control system and in field bus systems. The practical USB service interface can be used to upload firmware updates, output errors and transfer configurations from one device to another.

PERFORMANCE THAT LOWERS COSTS
Perfect cleaning results, maximum process reliability and productivity, more flexibility, simple operation and seamless integration into your process control environment – the SonoPower 3S series really saves costs.

> SONOBOOST SWEEP AND SONOPOWER MODULATION

The combined adjustment of frequency and amplitude creates a homogeneous and powerful sound field.

> SONOSCAN

Immediately after being switched on, SonoScan determines the optimum operating frequency and automatically adapts it during the cleaning process in the event of changed framework conditions. This practical plug and play function not only means the system is immediately ready to run: it also works with optimal efficiency at all times.

> INTERFACES AND INTEGRATION

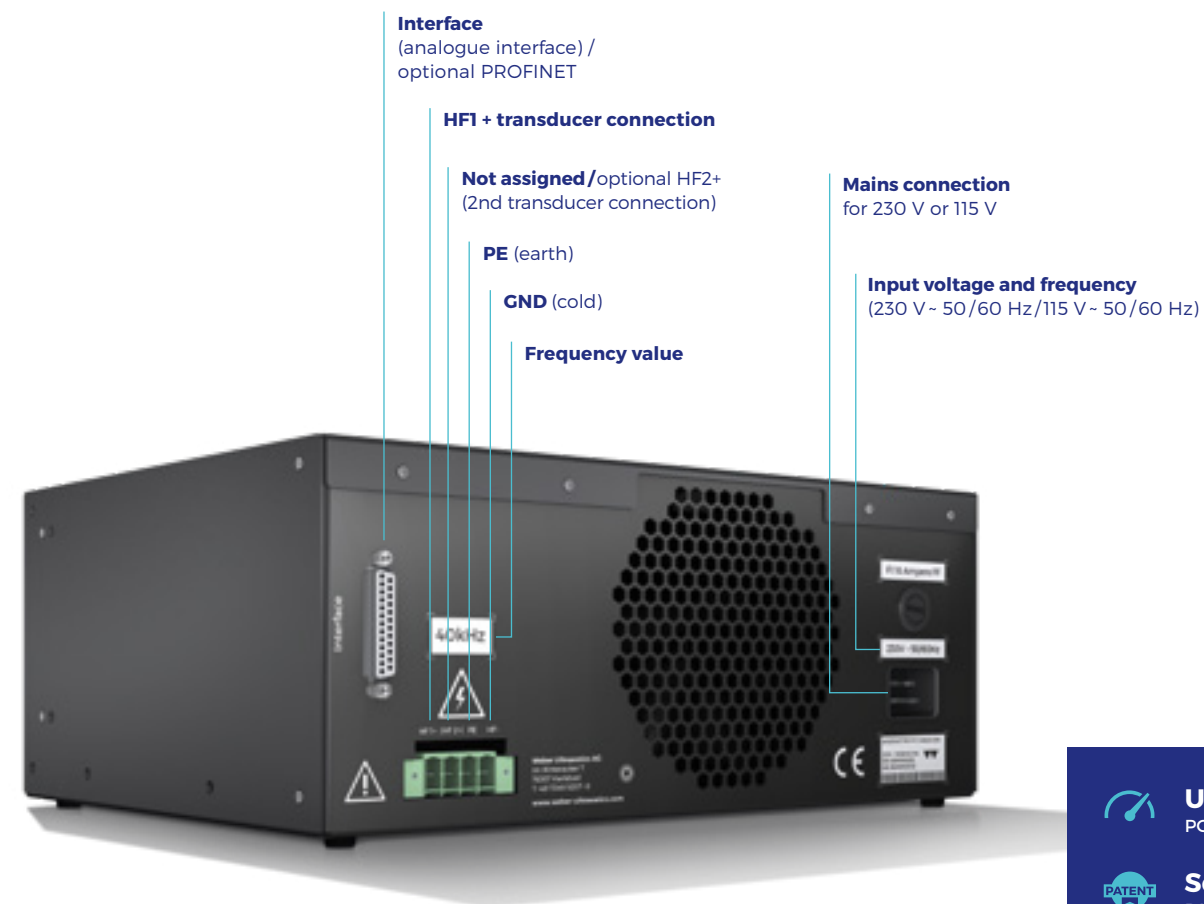
With the USB interface, updates can be performed and maintenance-relevant information exchanged in a fast and uncomplicated way. The PROFINET interface enables integration in higher-level control systems on request.

> SWITCH ON THE FLY

The SonoPower 3S can also switch between frequencies (Dual and Multi models) on the fly. The display enables quick access to the relevant process parameters and a fault analysis.

> FLEXIBILITY

With the Dual and Multi versions, multi-levelled processes can be covered by a single device. You can double the range of applications of your device with an optional second transducer connection.



- UP TO 3000 W**
POWER OUTPUT
- Scan/sweep/amplitude**
PATENT-PENDING FUNCTIONS
- 25-132 kHz**
FREQUENCY SPECTRUM
- Plug & play**
IMMEDIATELY READY TO RUN

THE BEST ULTRASOUND. FULL STOP.

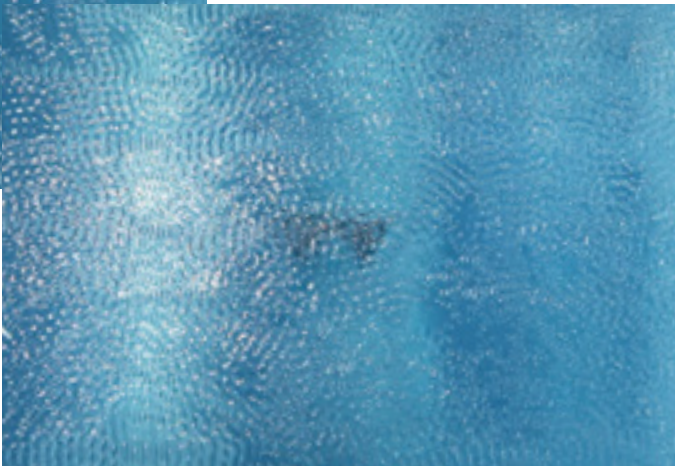
HOMOGENEOUS SOUND FIELDS FOR GENTLER
AND MORE THOROUGH CLEANING

Whether coarse or superfine cleaning – the more homogeneous the sound field, the better the cleaning results. This simple truth applies to all cleaning loads, from steel screws to sensitive printed circuit boards.

Laborious cleaning tests are now a thing of the past as SonoPower 3S generators automatically detect the ideal cleaning frequency using the patent-pending SonoScan function. SonoScan automatically compensates changes in the cleaning medium or wear on the transducers.



Tank without SonoBoost Sweep

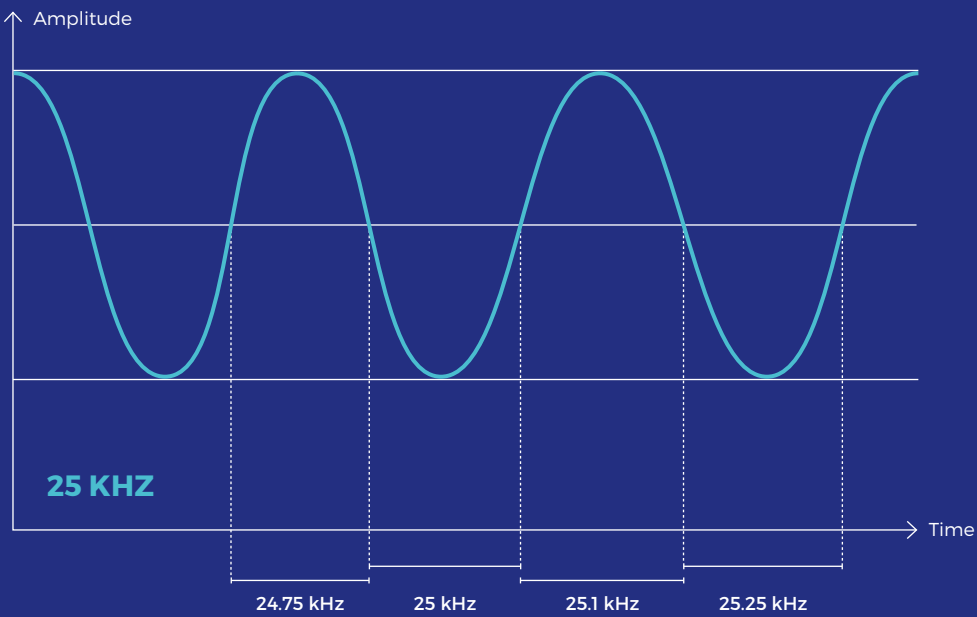


Tank with SonoBoost Sweep

The SonoPower 3S series produces an absolutely homogeneous sound field: the best ultrasound for the best cleaning result. The patent-pending innovations of SonoBoost Sweep and SonoPower Modulation guarantee cavitation quality previously considered impossible.

SONOBOOST SWEEP AND SONOPOWER MODULATION

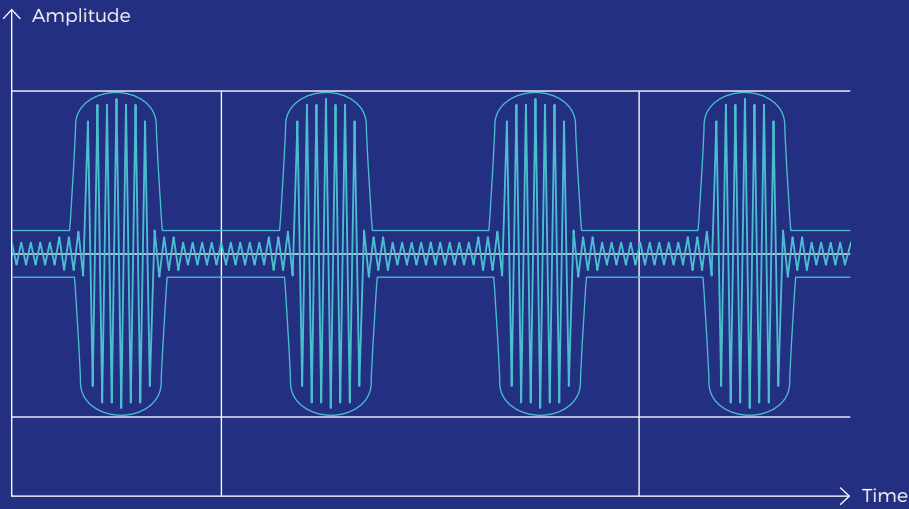
PATENT-PENDING INNOVATIONS



By making an asymmetrical adjustment to the frequency range, **SonoBoost Sweep** moves the cavitation fields in the tank in such a way that no dead zones emerge and a homogeneous sound field with the most efficient cleaning effect is achieved.

SonoPower Modulation combines the advantages of double half wave and pulsed ultrasound in order to produce more cavitation in the tank with the same power output.

This also reduces the temperature in the transducer and generator, resulting in a longer service life. The SonoPower 3S series thereby automatically achieves higher performance without any need for intervention on the part of the user.



TAILOR-MADE AS STANDARD

3 TYPES, 62 MODELS AND MANY OPTIONS – MAXIMUM FLEXIBILITY

The SonoPower 3S series is so flexible that there is a tailor-made solution for virtually every application. The series covers the entire spectrum of conventionally used ultrasonic frequencies. You can choose between generators with one, two or three frequencies.

THE RIGHT MODEL FOR COARSE, FINE OR SUPERFINE CLEANING

SONOPOWER 3S SINGLE									
Suitable for submersible and plate transducers									
	1000 W	1200 W	1500 W	1800 W	2000 W	2400 W	2600 W	3000 W	
25 kHz	115/230 V	115/230 V	115/230 V	115/230 V	115/230 V	230 V	230 V	230 V	
40 kHz	115/230 V	115/230 V	115/230 V	115/230 V	115/230 V	230 V	230 V	230 V	
50 kHz	115/230 V	115/230 V	115/230 V	115/230 V	115/230 V	230 V	230 V	230 V	
80 kHz	115/230 V	230 V	230 V	230 V	230 V				
132 kHz	115/230 V	230 V	230 V	230 V	230 V				

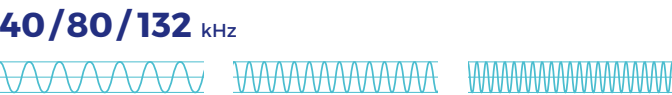
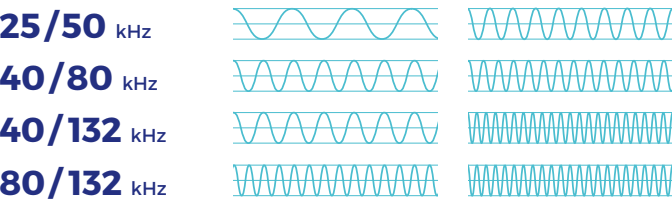
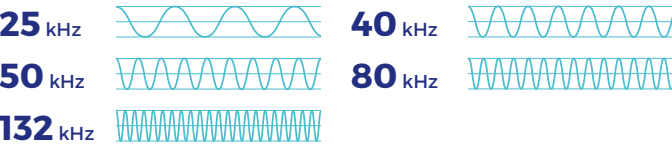
THE PERFECT COMBINATION FOR MULTI-TIERED PROCESSES

SONOPOWER 3S DUAL									
Suitable for submersible and plate transducers									
	1000 W	1200 W	1500 W	1800 W	2000 W	2400 W	2600 W	3000 W	
25/50 kHz	115/230 V	115/230 V	115/230 V	115/230 V	115/230 V	230 V	230 V	230 V	
40/80 kHz	115/230 V	230 V	230 V	230 V	230 V				
40/132 kHz	115/230 V	230 V	230 V	230 V	230 V				
80/132 kHz	115/230 V	230 V	230 V	230 V	230 V				

FULL FLEXIBILITY FROM COARSE TO SUPERFINE CLEANING

SONOPOWER 3S MULTI									
Suitable for submersible and plate transducers									
	1000 W	1200 W	1500 W	1800 W	2000 W	2400 W	2600 W	3000 W	
40/80/132 kHz	115/230 V	230 V	230 V	230 V	230 V				

Furthermore, you can change the frequency “on the fly” as the SonoPower 3S is a genuine all-in-one solution.



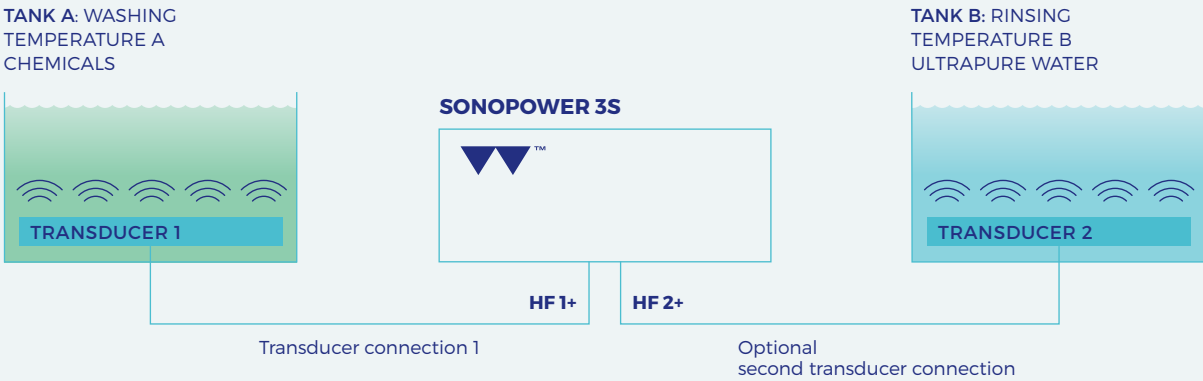
THE SECOND TRANSDUCER CONNECTION

ECONOMICAL OPTIMISATION OF MULTI-TIERED PROCESSES

The optional second transducer connection enables particularly economical system concepts. Multi-tiered processes can be run with a single generator. Because every model variant can be equipped with a second

transducer connection, the SonoPower 3S offers greater cost-effectiveness and flexibility in all areas of application.

SAMPLE APPLICATION:



SONOPOWER 3S SINGLE

The right frequency for your cleaning application
In the Single version we configure the SonoPower 3S precisely for your cleaning task. Thanks to the second transducer connection you can utilise its power output in two tanks: for example for two cleaning stages with the same frequency in different media (chemicals/water) and at different temperatures.



SONOPOWER 3S DUAL

The Dual version of the SonoPower 3S combines practical frequency pairs for the most demanding tasks. The SonoPower Dual enables two cleaning processes which can differ in terms of frequency, medium and temperature. This allows coarse cleaning to be performed first, followed by a fine cleaning process with the same generator.



SONOPOWER 3S MULTI

Coarse, fine and superfine cleaning with the SONOPOWER 3S MULTI
Full flexibility thanks to three frequencies. The Multi version allows you to choose the right frequency for cleaning different components or parts with different degrees of soiling. Alternatively you can utilise the different frequencies for multi-tiered cleaning processes in two tanks with different media and temperatures. The second transducer connection allows the potential of the all-rounder to be fully realised.

SCALABLE SYSTEM AUTOMATION

EFFICIENT CONTROL USING SOFTWARE AND INTERFACES

The SonoPower 3S series allows the realisation of cleaning systems of any size: from the individual cleaning tank, all the way up to fully automatically integrated large-scale systems with centrally installed generator clusters in a space-saving 19" rack.

The software of the SonoPower 3S series is an efficient tool that enables the system operator to control, monitor and document their cleaning processes as well as maintain the generators.

Programmable generators mean that reproducible cleaning results are achieved for all cleaning objects and in every batch.

Easy-to-understand plain text messages on the large colour display provide even more convenience and safety for manual operation.

Via the optional standard interfaces PROFINET and PROFIBUS the generators can be integrated in modern CIM solutions and operated conveniently from a monitor-based workplace.

Every generator has a USB service interface. This is used to upload firmware updates, replace configuration parameters and output errors. Moreover, it offers access to all measured values, parameters and notifications.



AT HOME ON THE WORLD MARKET

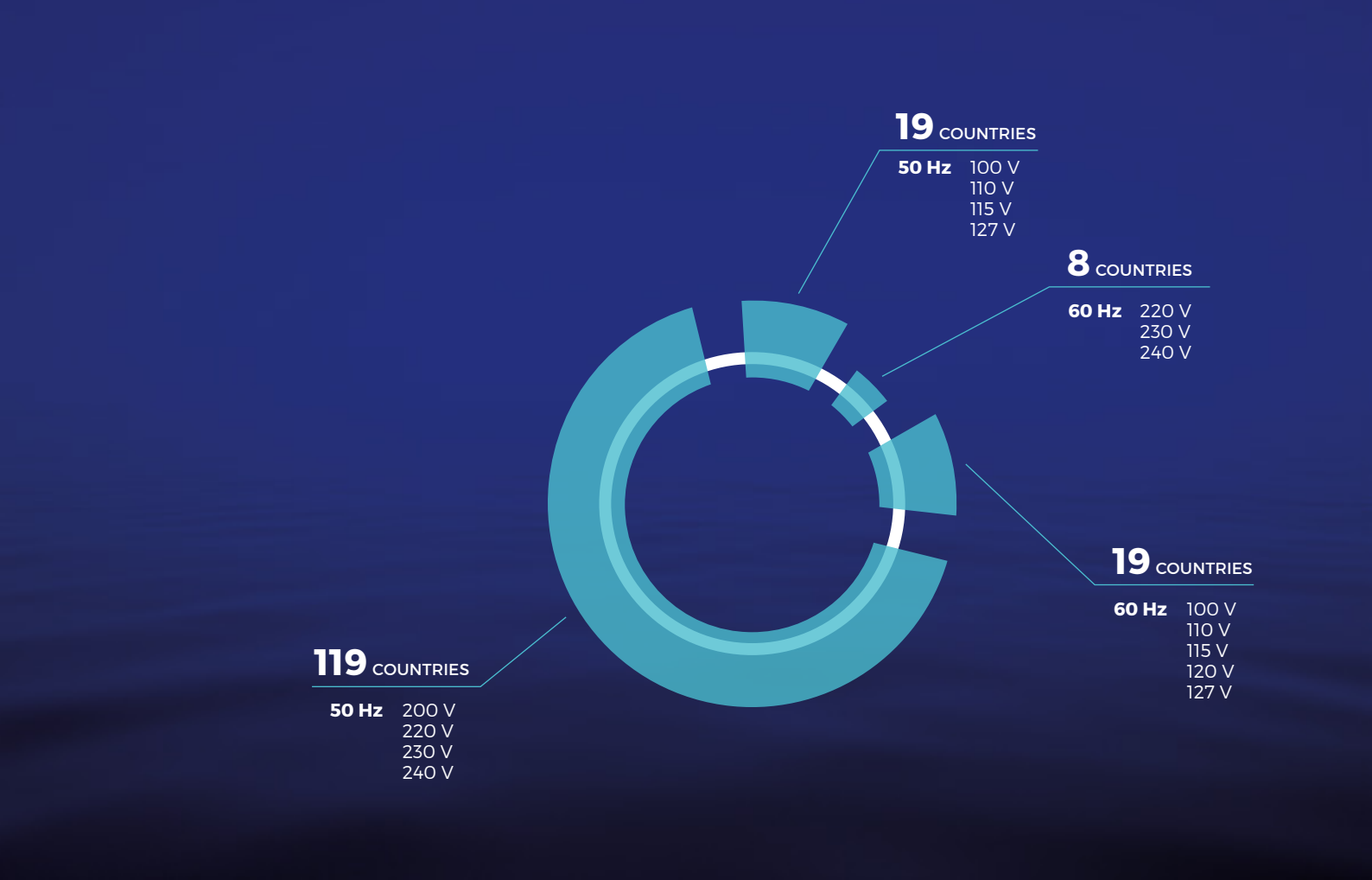
MADE IN GERMANY

With the SonoPower 3S series, Weber Ultrasonics exports the German conception of quality to the rest of the world. Intelligent functions ensure that the generators deliver the quality of cleaning expected from German workmanship – even under adverse framework conditions.

Generators of the SonoPower 3S series work on any mains supply. The generators compensate voltage fluctuations within the CE standard of 10 %, meaning that the sound field in the cleaning tank remains constant. Only in the event of larger fluctuations do the generators switch off automatically in order to prevent losses in quality.

This extends the service life and the required maintenance intervals. If the temperature exceeds 65 °C, the generators automatically switch off ultrasonic output. Once the temperature has fallen again, the ultrasonic output is then automatically switched on again. Because water can condense in the device at below 0 °C, operation at sub-zero temperatures is not possible.

The generators can cope with any climate: they can be used at ambient temperatures of 0 to 40 °C, which makes them suitable for climatically challenging production locations. The generators' ultra-quiet fans operate in a temperature-dependent manner. Depending on the situation, the speed is reduced so that less dust generally enters the device.



EFFICIENCY IN DETAIL

HOW TO MINIMISE UNPRODUCTIVE PREPARATION PHASES

GAS-FREE IN FIVE MINUTES

Gas in the cleaning medium prevents cavitation due to acoustic resistance. The program-controlled degas mode is used to remove the gas from the fluid. The medium is then free from gas in five to a maximum of ten minutes. Degassing is performed by means of

a particular ultrasonic pulse in combination with a special sweep frequency. For achieving an optimum cleaning quality the preparation of the medium is absolutely essential – something the SonoPower 3S does highly efficiently and easily at the touch of a button. This is a unique feature.



SWITCH ON THE FLY: SEAMLESS CLEANING

Through its "Switch on the fly" function, the SonoPower 3S enables the seamless transition from, for example, coarse to fine cleaning. The cleaning frequency can be switched during operation. A brief scan is sufficient and cleaning can continue. The result: shorter cleaning processes and greater productivity.

THE IDEAL COMPLEMENT

CUSTOM-MADE SUBMERSIBLE AND PLATE TRANSDUCERS

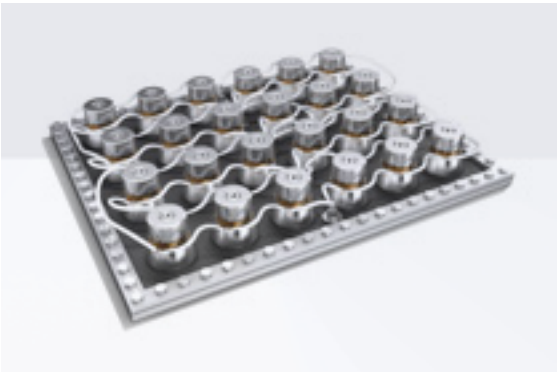
SonoSub submersible transducer



Only the perfect combination of generator and transducer guarantees the optimum cleaning result. Weber Ultrasonics manufactures SonoSub submersible transducers and SonoPlate plate transducers individually in line with your requirements in any form as a single-, dual- or multifrequency transducer.

The laser-welded housing of SonoSub is particularly robust and durable. The perfectly preconfigured transducers can be mounted on the floor of the tank or on the wall quickly and easily.

SonoPlate plate transducers are also supplied pre-configured in individual designs, enabling the customer's cleaning units to be fitted in no time at all.



SonoPlate plate transducer



AT YOUR SIDE

WEBER ULTRASONICS IS YOUR PARTNER FOR PIONEERING ULTRASONIC SOLUTIONS

Ultrasound is a key technology for the cleaning industry. Its possible applications perfect the manufacturing processes in virtually every industry and also offer a great deal of potential for innovation in the future. More than any other provider, Weber Ultrasonics covers the entire scope of ultrasonic applications in industrial environments.

In Weber Ultrasonics, industry and plant engineers have a development partner with a wealth of expertise in ultrasound. The technological leader from Germany sets standards when it comes to ultrasonic cleaning, welding and cutting. Thanks to its intensive research, Weber Ultrasonics is expanding the range of applications for ultrasound and thereby preparing the ground for innovative manufacturing methods and new technological processes. Its subsidiary Weber Entec, for example, plays a leading role in the disintegration of biogenic substances in environmental technology.

Weber Ultrasonics offers technology and service from a single source: with certified quality, developed and manufactured in state-of-the-art production facilities in Germany. Its portfolio comprises ultrasonic components such as generators, transducers and sonotrodes as well as turnkey systems that can be seamlessly integrated into existing or new production lines. Concise customer training courses and unique customer service with ultra-fast spare part delivery round off the portfolio.

WE DRIVE INNOVATION.

»Achieving the highest levels of cleanliness with ultrasound – that is our passion. We display full commitment and dedication to researching and working in this field.«

Dieter Weber



Dieter Weber, Chairman of the Supervisory Board
Markus Weber, Chief Innovation Officer



Weber Ultrasonics is entering a new dimension with the pioneering SonoPower 3S: megasound. For gentle and effective superfine cleaning of highly sensitive parts.

PREVIEW: THE NEW SONOPOWER 3S MEGASONIC BOOST

CLEANING WITH MEGASOUND. FROM 250 KHZ TO 1 MHZ.



FROM EARLY 2018

The technical superiority, unique innovations and smart user concept of the SonoPower 3S MegaSonic Boost particularly come to the fore in megasonic applications. Fragile components such as monocrystalline wafers from the field of photovoltaics are so fragile that an excessively strong cavitation field would damage them. With frequencies in the range from 250 kHz to 1 MHz, the SonoPower 3S MegaSonic Boost enables the particularly gentle and effective cleaning of even these highly sensitive components.

GLOBAL PLAYER, LOCAL SUPPORT

YOUR PARTNER FOR GREATER ADDED VALUE
THROUGH EFFICIENT CLEANING PROCESSES



Weber Ultrasonics is a global player that is deeply rooted in German quality traditions. The company has a flawless track record and has realised over 2000 projects for more than 1500 customers all over the world. In-depth expertise, an intensive development phase, exhaustive testing in the Group's own application centre, quality-controlled manufacturing in Germany, regional sales offices close to our customers and the very best on-site service guarantee solutions that maximise added value for our customers.



**WEBER
ULTRASONICS**

Im Hinteracker 7
76307 Karlsbad, Germany
T +49 (0)7248 9207-0 F +49 (0)7248 9207-11
mail@weber-ultrasonics.com
weber-ultrasonics.com