



ULTRASONIC CONTINUOUS CLEANING SYSTEMS FOR WIRE ALLOY



AREAS OF APPLICATION

With chrome/nickel alloys and for non-ferrous metals in particular, cleaning that is gentle to the product is crucial and desirable.

For this purpose, especially, it is advisable to carry out surface cleaning using ultrasound, since this process does not attack the basic material.

This procedure allows you in particular to remove stearate and rolling and drawing oils from the surface with processing times of about 1 second.

Before carrying out heat treatment, in particular, it is possible to achieve extremely high levels of cleanliness at a relatively low speed and in a tight space using ultrasonic degreasing systems.



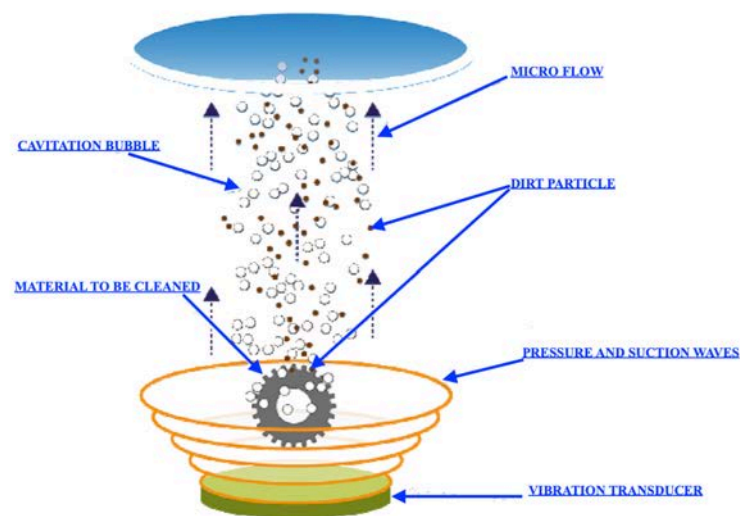
Gas bubbles generated by ultrasound on a wire surface

HOW ULTRASONIC CLEANING FUNCTIONS

In the case of ultrasonic cleaning, small scale pressure and suction waves are introduced into a liquid. This is done via vibrating elements that are attached to one of the sidewalls of a chamber or too its base.

When the vibrating elements are actuated electrically, they expand and retract. In the pressure phase, the liquid is displaced. At contraction, the liquid tries to follow but does not manage to do so due to inertia, which means that a cavitation bubble forms.

At reversal to the pressure phase, the bubble collapses suddenly and drags everything close to it towards its centre point, i.e. away from the workpiece. Many millions of these cavitation bubbles work in this way until everything that is adhering on the material to be cleaned has been removed.





**DIGITAL ULTRASONIC GENERATORS
SUITABLE FOR ANY CLEANING JOB**

With their frequencies of 25 kHz to 1 MHz, our digital ultrasound generators offer convincing and highly consistent amplitudes and performance.

In this way, you can use our ultrasound generators to clean even the most sensitive materials and surfaces effectively and gently.

Our ultrasound generators are the best choice when you have cleaning processes that require different sound frequencies.

**ULTRASONIC GENERATORS WITH
FREQUENCIES OF 25 kHz to 1 MHz**

The digital frequency generation and regulation capabilities of our ultrasound generators are particularly effective and ensure high levels of operating and process reliability.

They offer high consistency of amplitudes and performance and are available with standard frequencies of 25, 30, 40, 80, 120 and 250 kHz and in different equipment variants.

Our ultrasound generators offer you an optimum solution for coarse and fine cleaning as well as for cleaning processes that need different frequencies.

APT-WESERO ultrasound generators combine innovative technology with high levels of efficiency and convincing quality.



TECHNICAL DATA:

Model:	Open frame, standalone unit, hat rail generator, 19" housing, module generator
Capacity:	80 W bis 3000 Wa
Main connection:	230/240 V—50 Hz, sowie 380 Volt, 3 Ph, N, PE
Ultrasound frequency:	25, 30, 40, 50, 75, 250, 500 Khz, 1 Mhz

You can use our transducers to adapt the ultrasonic frequency and sound power perfectly to the material that you want to clean.





THE RIGHT CLEANING CHEMICALS FOR YOUR ULTRASONIC PROCESS

INTERACTION OF CLEANING METHODS AND CLEANING CHEMICALS

To achieve a perfect cleaning result, you must match the cleaning chemicals with the respective cleaning process.

The important thing when choosing a cleaning agent is to know exactly your base material and the type of contamination as well as the desired degree of cleanliness that you want to achieve.

The cleaning chemical should dissolve the contaminant but must not attach the workpiece. After cleaning, you can create the surface for another process in the rinsing tank.

An example of this is creating a surface with a phosphate layer to support a painting process or to create a smooth metallic surface to carry out subsequent electrochemical application.

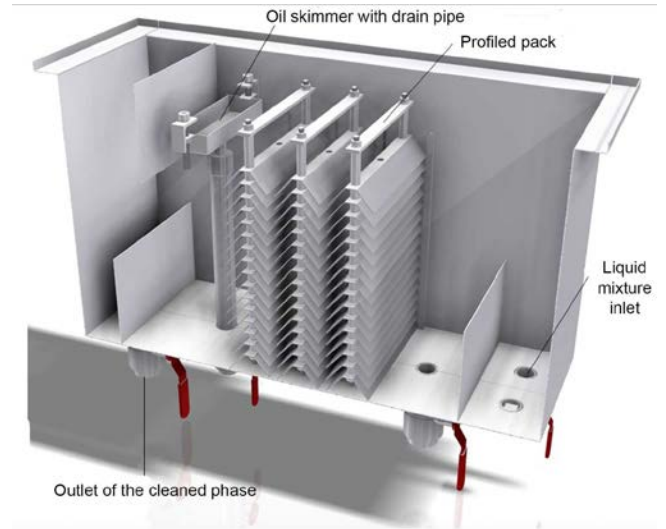


FILTER SYSTEMS TO MAINTAIN THE TANK

The cleaning bath itself must, of course, be treated on an ongoing basis to guarantee a permanent high level of cleaning quality. APT-WESERO has a number of devices and procedures to do this.



**PAPER DISK FILTER FOR
SOLIDS FILTRATION**



**PLATE PHASE SEPARATOR FOR
SEPARATING THE OIL PHASE**



**FLOATING SKIMMER WITHIN A
DEGREASING TANK**



**COMPACT SYSTEM WITH STORAGE TANK,
BUILT-IN HEATER, AND CONTROLS**